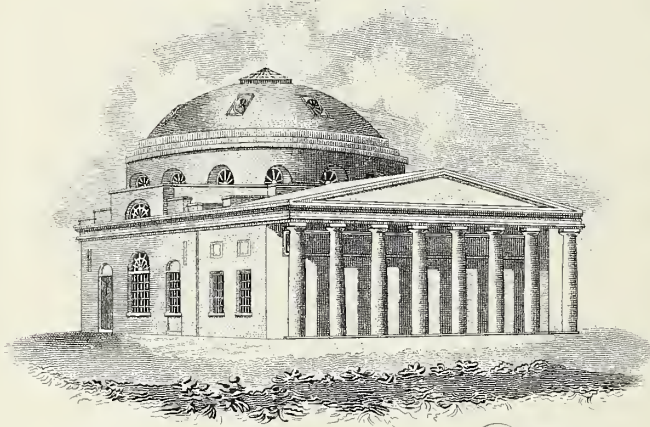




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# THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

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# THE JOURNAL

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No. 1

### **Tuberculosis of the Mesenteric Lymph Glands**

MILTON B. MILLER, M.D., Topeka

Read before the annual meeting of the Kansas Medical Society, at Topeka, Kan., May 7, 8 and 9, 1930.

Tuberculosis of the mesenteric lymph glands, or tabes mesentericus, has long been recognized as a clinical entity. Considerable has been written on the subject, and my only purpose in bringing it forth again is to further emphasize its importance. It must not be forgotten in the consideration of some of our obscure abdominal pains, particularly in the lower right quadrant. There is no question that it is frequently present and never recognized, and when surgeons are more or less on the look out for the condition, the incidence in their cases is higher.

Figures of various authors would indicate a high percentage in children, yet, in our experience it is found more frequently in young adults and those between the ages of 15 and 35. In our series of 51 cases recorded between 1925 and 1930 there were only 6 under 15 years of age, 22 between 15 and 20, 19 between 20 and 35, 4 over 35, and one at age 60.

In early infancy it is considered quite rare, though a Spanish author, De La Alberca,<sup>1</sup> reports three cases that came to autopsy, all under 6 months of age, with extensive tubercular involvement of the mesenteric glands.

#### ETIOLOGY

Both the bovine and human types of organisms are found. Bacilli may be ingested either in milk or milk products of tuberculous animals. The human type may come from the swallowing of infected sputum. In the greater percentage of cases where bacteriological study has been made, the organisms have been of the bovine type.

The mode of infection is generally believed to be through the intestinal mu-

cous membrane to the glands which drain it. Carson<sup>2</sup> believes there must be some breach in the intestinal mucous membrane, but the general opinion of numerous authors is that it is not necessary for the tubercle bacillus to cause a lesion in the intestinal mucosa previous to entrance into the lymph glands of the mesentery. Willensky and Hahn,<sup>3</sup> and also Bell<sup>4</sup> discuss the analogy existing between the cervical lymph nodes and the lymphadenoid tissue of the pharynx, the tonsils and the intra abdominal lymphatic apparatus, namely the mesenteric lymph glands, and the Peyer's patches of the terminal ileum. It being assumed that Peyer's patches, like the tonsils, form the point of entry for the infecting bacteria. The ileo-cecal group of mesenteric glands are the ones most frequently affected, and Corner<sup>5</sup> believes this to be due to a physiological reason which he describes as a comparative stasis of the products of digestion in a mildly alkaline medium at this site—a condition which he thinks favors the passage of tubercle bacilli through the intact mucous membrane of the bowel.

There is some difference of opinion as to whether the tubercle bacillus is the etiological factor in all cases of mesenteric lymphadenitis. Struthers<sup>6</sup> believes that most cases in which the tubercle bacilli have not been demonstrated, are, nevertheless, reactions provoked by the invasion of that organism. The reaction perhaps of a filterable virus has been suggested in some research work of the Rockefeller Institute. Braithwaite<sup>7</sup> believes the tubercle bacillus to be the infecting organism in all cases. Rosenberger,<sup>8</sup> who has made extensive bacteriological study of the mesenteric glands, found in a group of so called non-tuberculous cases—that is those in which it was impossible to demonstrate tuberculosis in any part of the body—that involved mesenteric glands showed



no tubercle bacillus in the spreads, but that inoculation of guinea pigs made from the maceration of these glands, produced positive tubercular lesions in 40 per cent of the cases, and in another group, where there were involved glands in definite tuberculous subjects, 97 per cent of these glands showed infectivity in animal inoculation.

#### PATHOLOGY

The pathological process developing in the tubercular lymph glands of the mesentery has been found similar to the tubercular lymph nodes in other parts of the body. The findings are dependent on the stage of the process, the primary lesion is of course the tubercle and these tend to coalesce and produce swelling or simple hyperplasia. The gland may then go through the intermediary stages of fibrosis and caseation to the final stage of calcification.

Hyperplasia may become marked, periadenitis develop, followed by some local peritonitis and the formation of adhesive bands as reported by some, with complicating obstruction of the bowel. Or a rupture of a caseous tumor may occur as seen by some, with development of general peritonitis, which is more common in children, according to Dr. Charles Mayo.<sup>9</sup>

Cases have also been reported of obstruction of the ureter and of the common bile duct by pressure of caseous or calcified tuberculous mesenteric glands.

In our series of cases we have noted frequently the presence of enlarged glands in other parts of the body, particularly in the inguinal and cervical regions. In a recent case we excised both an inguinal and a mesenteric gland for diagnostic purposes and in both a definite tubercular structure was reported from the pathological laboratory.

It is of interest to note that enlargement of the mesenteric lymph nodes is practically never seen with the ordinary types of acute appendicitis, however bad the local pathology may be. Struthers<sup>6</sup> brings out this point in his discussion of the subject.

#### SYMPTOMS

Due to the wide distribution of the mesenteric glands the symptoms may de-

velop in any part of the abdomen, but for physiological reasons, previously mentioned, the ileo-cecal group are most often affected, giving us our symptoms in the right lower quadrant. In most cases the disease runs a more or less chronic course, with or without acute exacerbations and usually lasting several years. However, the symptoms may be so acute at any time with severe right lower quadrant pain, muscular rigidity, elevated temperature, increased pulse rate and leucocytosis, that immediate operation becomes imperative because, under these circumstances, who will take the risk of putting aside the possibility of an acute appendicitis? Appendicitis still is, and probably always will be, a treacherous disease, and in doubtful cases a "wait and see" policy is apt to be followed by disastrous results, especially in children. With most of the acute attacks of pain from tubercular mesenteric glands, the patients do not show the general appearance of a severe illness, and these acute symptoms may subside in several hours, or last a day or so. In several of our cases it has happened that an acute abdomen was observed by the family physician, before bringing the patient to the hospital, but at the time of our examination, perhaps several hours later, the abdomen has been found relaxed and the pain practically gone. Pain in these cases is only elicited on deep pressure over the ileo-cecal region. Again it has been noticed in some of these cases that not only the abdomen has become relaxed, but that there is as much tenderness on the left side of the abdomen as on the right and the glands are often palpable in both areas. Operations when done on these patients, have revealed most commonly an almost normal appendix, or at least one so little affected that it is obviously insufficient to give rise to the symptoms complained of. But here we find numerous enlarged mesenteric glands in the ileo-cecal angle or palpable mesenteric glands elsewhere, removal of which, for pathological examination has invariably shown a definite tubercular structure.

The most common form of this disease, as we have observed, has been the

chronic type. The patients are, as a rule, not of the rugged type, but rather are slender, poorly nourished, of poor color and often anemic; they tire easily, have lost weight or fail to gain in weight. These findings, however, are not absolute, as occasionally some of the robust type have been found with positive tubercular mesenteric glands. In those of the chronic type, we may find a slight rise in the daily temperature over a period of time, not so often an increase in the blood count, but if the white count is increased, the "polys" more often are not. Rarely is there found any other tuberculous focus in the body, and this has been checked by several authors with *x-ray* of these cases. In only one of our cases was there a showing of definite tuberculosis, which was in the chest, and this case died several years later of tuberculosis. This particular patient had a child one year previous to her death that also died at the age of 6 months from tuberculous meningitis.

The presenting symptom in the chronic type is pain, usually of an intermittent character, the pain may be in most any part of the abdomen, depending on the group of mesenteric glands involved, but, as mentioned, is more common in the right iliac fossa. Sometimes this pain is described as sharp and colic like, or may be of a drawing or dragging character. These pains may come several times during the day, come on suddenly and stop as suddenly as they came on, then disappear entirely, not to recur for several weeks, a month or more. The pains, as a rule, have no relation to the intake of food.

Carson<sup>7</sup> believes this pain to be the result of a reflex spasm or colic, with contraction of the circular fibres of the small intestine, incited by irritation of the vagus filaments in the mesentery.

Those of the chronic type tend to have acute exacerbations. The operative finding in the chronic cases reveals, as in the acute form, the enlarged mesenteric glands, varying in size from a small pea to the size of a hazel-nut or small almond, and these glands are usually in the ileo-cecal angle. Sometimes the glands are soft or we may see both the

soft and the calcified. In our series we have not found any of the suppurative type or any of the large caseous and large calcified glands described by some of the writers on this subject.

#### DIAGNOSIS

In the diagnosis one must consider of first importance the history of the illness, with particular reference to the character of pains; next the type of patient, especially the slender undernourished individuals; then, the presence of other lymphatic enlargements as being suggestive; and finally the feeling of palpable glands within the abdomen, with more or less tenderness over these glands.

The *x-ray* examination has, in recent years, been found to be of great value in the diagnosis of the calcified mesenteric glands producing abdominal symptomatology. Calcified glands may or may not produce symptoms. Dunham and Smythe,<sup>10</sup> who have done a great deal of work in this line, describe in detail the usual appearance of these glands, namely as being white and not homogeneous, often spoken of as "honey-combed," "moth eaten," "mottled," or "coarsely stippled." They state the advisability of taking both antero-posterior and lateral exposures and also the making of repeated films to determine the position, and to know definitely that they are retaining that position.

The lateral films will show the mesenteric glands anterior to the bodies of the vertebrae, thus differentiating them from stones in the kidney. As a further aid to diagnosis may be mentioned the von Pirquet test, which is considered by some of value in children.

In the differential diagnosis it must be stated again that the most frequent abdominal condition, acute appendicitis, is most often difficult to differentiate, but it is far safer to err by the removal of an inoffensive appendix. Other conditions to be considered are chronic appendicitis, stone in the kidney or ureter, pyelonephritis particularly in children, intussusception, Meckel's diverticulitis, tumors of the abdominal organs.

Complications mentioned by various writers are ileus, abscess formation, per-



foration, pressure on the common bile duct, the ureter or portal vein, miliary tuberculosis and tuberculous peritonitis.

#### TREATMENT

The treatment of tuberculosis of the mesenteric lymph glands may be medical and surgical. Of particular importance is prophylaxis. Eliminate the possibility of infection by milk from tuberculous cows—see that the tuberculin test has been given these cows. In the medical care it must be emphasized that the usual treatment for tuberculosis is essential, that is, rest, high caloric diet, fresh air and sunlight, heliotherapy being of decided value. Ultra violet therapy, when it can be used under proper supervision, is considered of exceptional value, particularly in the chronic form with anemia, and in those having acute exacerbations. The few cases we have treated with the quartz light have shown marked improvement. The *x*-ray also has been used with great success by some, particularly during the last few years. And this mode of treatment should not be overlooked, as we have all seen the good effects of *x*-ray therapy in tuberculosis of the cervical glands.

Drug therapy we believe also of considerable value, and in our cases we have advised the use of hydriodic acid and the calcium creosote compounds, taken over a period of months, with interval rest periods, the patients to be kept under observation to avoid gastrointestinal or other disturbances.

Surgically we believe these cases get along better if their appendix is removed, especially that group of cases where the acute attacks so simulate an acute appendicitis that it is impossible to differentiate. There are tubercular mesenteric glands, however, that demand surgical removal, because, on account of their size, they produce pressure symptoms, or because they have become large, caseous, calcareous or suppurative tumors, producing other intra abdominal complications.

In our series none of these more serious types were found, but numerous cases are cited in the literature.

#### SUMMARY

In summary would say, tuberculosis of the mesenteric lymph glands is not an uncommon disease. It is by no means confined to children, but, as our records show, its occurrence in early adult life is just as prevalent.

The symptoms are not always clearly defined and in the acute attacks are with difficulty differentiated from acute appendicitis. In the chronic type, with pains of a rather definite character, the feeling of palpable intra abdominal glands and other palpable glands in the body of an undernourished patient, is fairly diagnostic.

In the treatment I would stress prolonged medical care as in the treatment of any tuberculous patient, and surgery for the complications, to include appendectomy in cases with the persistent right lower quadrant pains, with accompanying mesenteric involvement.

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#### Diabetes Mellitus

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Read before the annual meeting of the Kansas Medical Society at Topeka, Kan., May 7, 8 and 9, 1930.

Diabetes Mellitus is a disease of disturbed metabolism of the glandular structures particularly of the pancreas and the glycogenic relation of the liver. It is characterized by a continuous pathological amount of sugar in the urine, or glycosuria. Glycosuria is not always diabetes, but diabetes mellitus is always glycosuria. This disturbed metabolism is confined largely to carbohydrate foods, but it appears that both proteins and



fats enter into the conditions known as diabetes, as both may enter into the condition of acidosis. Continuous high ingestion of fats figures in acidosis, which is the thing most dreaded and hard to handle in diabetes as we will show later. Continued excess of glucose in the blood eventually breaks down the equilibrium and resistance of the patient and the toxic conditions then arise.

Diabetics usually get along fine under regular regimes, but whenever an acute infection sets in we immediately have an exaggerated condition, therefore as a result of diabetes the patient is continually under a fight for life so, when any additional work is required, he is unable to combat the extra effort.

Diabetes is a disease as old as man, but the first history is about A. D. 25 when Celsus, a Roman physician, learned something about it. Sustra of India was aware of the sweet taste of urine, in the seventh century. Dobson later proved this to be sugar. About the first real study was in 1855, when Claude Bernard found that by puncture of the diabetic center in the medulla glycosuria would result, proving there is a diabetic center. Von Merrig and Minkowski later found that from extirpation of the pancreas of dogs diabetes resulted. This is the first proof that diabetes is not a renal but a pancreatic disease. We know now that the pancreas as a whole is not affected but the Isles of Langerhans. The blood sugar content is the vital thing to the patient and the main clue to the condition of the patient, but the urine findings are practically sufficient to carry all patients, with only an occasional blood sugar test.

Before going further, I wish to state that diabetics are very rarely cured, but we are able to lengthen the life of all patients that are properly treated. I believe we are now lessening the death rate but the statistics seem to prove otherwise, but I believe this is because diabetes is now looked for and reported, when in the past they all died and were not reported as diabetics. In years to come, I look for a gain in the death rate, for the lives of those now being treated will come to their end of time and be reported, so I

am prone to say once a diabetic always a diabetic. Today it is a reflection upon the physician to not recognize a diabetic, yet it is easy to do so, for the family history is not correct, and we do not get a clinical picture until the disease is far along. However, even with the most simple office equipment, no one should pass up the diagnosis. We must remember that the normal blood sugar is from .06 to .12 per cent, but most people run near the higher point. When the blood sugar gets to .17 per cent we reach the renal threshold and the sugar spills into the urine and we find it there first because urine examination is so simple compared to the blood sugar test. Urine is usually the first proof, unless the case is far along, when there is shown a line of symptoms, such as general malaise, fatigue, loss of flesh, sweet breath, in women perhaps loss of menstrual function, frequent micturition, history of eating lots of sweets, sticky urine, clothes sticky, and the doctor finds the positive urine. Continued line of symptoms, as the case becomes more toxic, are drowsiness, heavy deep breathing, and in extreme cases coma. The symptoms may take another lead before these above listed and infections in any part of the body may occur usually around the urinary openings, especially in females, boils, furuncles, eczematous conditions and lastly gangrene. Coma is also in line. Perhaps later on we find a visual disturbance, diabetic cataract, or artificial myopia.

Diabetic urine usually carries a heavy sp. gr. and this is a valuable point. However, diabetic urine in patients being treated heavily with insulin may not run high. I have found many times urine positive for sugar with sp. gr. from 1005 to 1000. This was during a time when there was a large ingestion of liquids and the patient was taking around 200 units per twenty-four hours. The normal sugar content of the urine is .02 per cent which cannot be detected outside of the laboratory.

We told you normal blood contained .06 to .12 per cent of sugar which is equivalent to 60 to 120 milligrams to 100 cc. of blood. When blood sugar gets

around 300 most cases become comatose, however, patients tolerate sugar in different amounts. Again, urine may not always show sugar exactly according to the blood sugar. As long as the liver is able to store up glucose we do not have a glycosuria, but when it has reached its capacity or some other disease sets in, glycosuria shows up. Therefore we find any liver pathology is intimately connected with the pancreatic function, both from a physiologic and anatomical, or pathological standpoint. Dever once said if you have diabetes have your gall bladder operated upon. He should have said have the liver studied. The liver turns loose its sugar at two special times, first, when there is a low ingestion of carbohydrate foods, second, when the body actions are using especially large amounts of glucose.

The ingestion of carbohydrate foods immediately increases the blood sugar, but with a normal metabolic process it does not become pathological, but the diabetic is unable to burn up the sugar and it is therefore left in the blood to be excreted by the kidney. It appears that up until recently glucose was the only sugar that could be measured in the blood. This may be true yet.

When we realize that two-thirds of the body energy is derived from glucose, we will realize what it means to the patient to lose this vital food, or to have it limited in his diet. If glucose did not come from fats and proteins also, the diabetic could not last very long. Some other sources also yield glucose, such as glycol, aldehyde, glycerol, and lactic acid. Carbohydrates yield 100 per cent sugar, proteins 58 per cent, fats 10 per cent. Some claim fats do not yield sugar but it is generally conceded they do.

In the acidosis of diabetes we have the most dreaded complication, because of the inability to correct diet and get proper assimilation. I believe we will be able to show that some of us have been wrong in feeding against this condition. For instance, we advise the patient to cut down his carbohydrates and eat more fats and proteins. He does this, first because he is hungry, second because he demands food to keep going. In

other words it takes calories to keep each of us going. As a result of the ingestion of fats and proteins we have deposited in the body the fatty acid products as B-hydroxy-butyric acid, diacetic acid and acetone, some amino acids such as tyrosin, leucine and phenylalanin, which yield fatty acids. It is proven that proteins also yield as much as 46 per cent fats, so the protein high content is injurious, because it contributes to the fatty acid formation. Fat is a less readily oxidized food and must have fire to burn it and that fire must come from union with carbohydrate foods. So we must have some carbohydrates to do this.

Acidosis is supposed to be due to high blood sugar but everyone knows that the fatty acids and acetone bodies are prevalent in this condition, but the absorption of fats when added too largely to a diabetic diet is really adding the very thing we want to eliminate. We must find a happy middle ground. In diabetics the power to burn sugar is lost and then we find the ketones in the urine.

At some time or other there had to be an infection in the Isles of Langerhans to destroy their function for that is really the diabetic pathology. This may again set up or be again due to infective processes in other parts of the body. This may enter by the blood stream, lymphatics, or by direct injury. So diabetes is a disease of the internal secretion of the pancreas but yet the normal action of the secretions of the pancreas are still of vital importance. No real gain had been made in diabetes until the last eight years, when Banting and Best discovered the secretion of the Isles of Langerhans which they named insulin. Since that time diets have been studied and added to our knowledge. We may as well say that diabetes is a disease caused by the lack of insulin in the blood. For it is the action of insulin in the blood that makes sugar fit for the assimilation of the body.

Diabetes is more prevalent in the Hebrew race. Fat subjects are especially liable to diabetes. People of sedentary habits are also. Tudor says one out of each one hundred have diabetes. Only 10 per cent of diabetics are underweight.



This should be modified and applied to the ambulatory time for in the end all are thin, unless they die of some acute complication.

Vomiting is the symptom of acidosis that causes our blood to run cold. Inability to keep down food and a wasting disease don't make a happy picture. These practically always bring up large amounts of bile after all the food is emitted. This seems to me to prove again the close relation of the liver function in diabetes.

Treatment of diabetes is really the point at issue, for it is nearly criminal now not to make an early diagnosis. In the past treatment was a diet process, with perhaps codeine, which are both good yet, and the use of general tonics. Today the treatment is first diet, second diet and insulin and third includes the first two together with all modern lines of treatment of shock, for this covers the cases that have gone to the operating room or have had acute acidosis with general systemic and organic exhaustion. It is impossible in so short a time to keep these lines of treatment separate.

Many diabetics are able to get along with only diet restrictions, especially those who are at middle life or older. The child does not stand diabetes well, so needs closer observation and the young adult is in about the same class.

Treatment with insulin is by no means a child's play but a very serious matter. Many today owe their lives to insulin and I dare say some few have hurriedly passed away because of injudicious insulin treatment. The physician who has not had insulin experience often has to learn it from his patient who has been hospitalized and come home with instructions. After many years daily with insulin, I just begin to learn it. I believe treatment of insulin shock, or hyperinsulinism is more vital to the physician and patient than the real treatment of the disease. Insulin is perhaps the most potent of all endocrine products and it always does as it is supposed to do. When it goes wrong it does so because the administrator has not known it.

The first symptoms of hyperinsulinism, are faintness, excitability, wide open

eyes, rapid pulse, hunger, then to go on to severe sweating and coma. You who have never seen a severe reaction are either lucky or else have not had experience with insulin. I dare say every person treated with insulin has had more or less reaction. Usually food of a sugar nature will suffice to check this condition and every patient should at all times carry some candy with him. Give them food of any kind that is available, but sugars are best. Those that go into coma have to have glucose per vein. It is most gratifying to see these patients come out of this sleep, while the needle is still in the vein. Insulin coma is due to an extreme reduction of the blood sugar, and the condition looks as ghastly as death itself. I have never known the glucose intravenous to fail, in my experience.

Every diabetic should in beginning treatment have all his food taken away and the tests run to ascertain his condition. Then add food and see how much he can take before sugar is pathological. If he cannot take sufficient calories to live and enjoy life or work, he must have insulin added. Insulin first reduces the hyperglycemia, second removes the glycosuria, third removes the ketonuria, fourth causes the liver to store glycogen when given with insulin, fifth causes the respiratory quotient to be raised, when sugar is added to the food, sixth removes the general subjective symptoms of diabetes, seventh causes the body weight to be increased and eighth prolongs life. This is all done because of some action by insulin in the blood stream not yet understood.

After any reaction, we must cut down the dose of insulin. These reactions are not always due to the dose administered but because the pancreas may be coming back and is secreting insulin itself. We cannot estimate the amount, so it is time to be careful. I have found many times it is hard to cut down the dosage fast enough in a convalescing patient. In some serious cases it is hard to diagnose between coma from diabetes and insulin coma, but in diabetic coma there is more stupor, it comes on slower and does not show the extreme sweating and the exhaustion that insulin does. Again your

knowledge of when and how much or no insulin clears the field.

Convulsions are often a result of hyper-insulinism. These can most always be traced to a definite period of time after the last dose or the time two doses reach their height of action. The patients usually come out of this before treatment can be given or else go on into coma. Some have the convulsive actions but come out with only the ingestion of syrups, without losing consciousness.

In administering insulin it is well to bear in mind that all diabetics carry a higher blood and urine sugar in the early morning and forenoon than in the later part of the day, so this will give you the cue that you can give twice as large a dose of insulin early in the day as you can in the evening without reaction. Insulin is supposed to reach its height of action in four hours but I have found in some patients that it is five hours. One unit of insulin will care for  $2\frac{1}{2}$  grams of carbohydrates, 2 grams of protein or 1.5 grams of fat. In severe diabetics I have found we need to give much more insulin than this would lead you to think, because we cannot measure the action of the patient.

The twenty-four hours dosage of insulin is from 10 units to near 300 according to my experience. Every case is different and must be worked out individually. In ambulatory cases insulin should be given in relation to ingestion of food. Reactions are often due to the patient not taking insulin at the proper time. I saw a severe coma due to taking insulin at 11 p. m. when the last food was taken at 5 p. m. and the dosage was her customary amount. It is very rarely that an insulin reaction takes place between 1 a. m. and 12 m. If it does, someone is to blame. Ambulatory cases should never have this occur, because their dosage should be stopped longer than five hours before this time. In severe cases with acidosis insulin may be given every hour. Ten units, until test shows results, twenty units every two hours or forty every four hours. The first dose may be especially large and with safety. Forty to fifty units and repeated soon, if no results, in cases of coma or severe acidosis.

The vomiting of acidosis is a feature that nothing but insulin will stop. So practically all these cases have to come near the reaction stage before results are apparent. I like then to see the reaction and to hear the patient call for food. Insulin alone will stop an acidosis but it will do it quicker if given with glucose. Therefore insulin and glucose in the treatment for acidosis. If unable to take or retain any food, we will give it by rectum at the rate of  $2\frac{1}{2}$  per cent each glucose and soda. If it is not retained give it by intravenous route, 500 cc. per three hours. In these cases I always give normal saline hypodermoclysis, 500 cc. as conditions warrant, three or four times in twenty-four hours. As sedatives, codeine, pantopon or morphia if need be, I prefer pantopon. I am of the opinion that hypo-insulinism, or blood short of insulin is a direct irritant to the vomiting center, for I have many times seen patients begin to vomit at four or five a. m., when no insulin had been given for eight to ten hours, stop vomiting immediately upon the dose of thirty to forty units of insulin. I know you will say this is due to acidosis, but it seems unpractical to say the whole acidosis could be changed so soon, but the blood condition is changed at once, and vomiting stops for that twenty-four hour period but with other doses of insulin following. Rarely do ambulatory cases ever need doses as high as 100 units per day. Acute cases may need very high doses. One case in mind carried a temperature of  $104^{\circ}$  at two points in the day about twelve hours apart for nearly three weeks, took twenty-five units each three hours. Had positive urine a lot of mornings but negative most every evening. Blood sugar ran to 380. Never any coma. This case for six years took forty units per day in one dose. She now for four months has been from bad to worse and we are unable to get her balance to remain at a certain point.

In gangrene I have given up to 240 units and made the urine sugar free but was unable to heal the foot. Yet two years ago we did heal a bad gangrene in this case with insulin. This case went to



amputation with sugar free urine, and the stump healed by first intention, and now seven months later she takes forty units twice a day and is in fine shape and urine sugar free most of the time.

Thus far we have shown that certain foods tend to cause certain conditions. I am of the opinion that Dr. Sansum is about right when he outlines a more normal diet for diabetes even if he has to increase insulin dosage. Since two-thirds of body strength comes from sugar, and both fats and proteins tend to form acidosis, it seems better to cut these down and give carbohydrates. A patient who is taking insulin can have taken from his diet 100 grams of fat and can add 130 grams of carbohydrates without the addition of more insulin. Since as much as 46 per cent of protein is converted into fats, it appears more logical that we give these calories in carbohydrates and reduce the ketone or fatty acid products. Diets must carry the necessary protein which is about one gram per kilo of body weight. This is imperative.

Patients taking 100 units or more per day will find very much satisfaction in taking five-elevenths of their daily dosage one hour before breakfast, three-elevenths one hour after dinner and three-elevenths one hour after supper. Those taking less may use the same schedule but the two dose plan seems more advisable, five-eighths one hour after breakfast and three-eighths one hour before the evening meal. Cases taking around thirty-five or forty usually are satisfactory on one dose either in the forenoon or afternoon. The social functions are more satisfactory with the afternoon dosage, for the extra voiding is then controlled.

Usually it is sufficient to handle these cases without continuous blood sugar examination, but in acute cases we run tests on every voiding of urine. Blood examinations are both depleting and unpleasant and are usually not run or the laboratory not available when you need it. Blood examinations are the proof. It is practically impossible to over dose when there is acetone in the urine. Again blood examinations are very expensive. Render your urine sugar free to a nor-

mal degree and then if the condition of the patient is unsatisfactory examine the blood.

The more liberal diet list, which is composed of two parts carbohydrate to one of fat, as used by Dr. W. D. Sansum, with sufficient proteins and sufficient insulin dosage has been found very profitable in my cases, while the one part carbohydrate, two of protein and three of fats as used by Dr. Majors has proven very satisfactory. I wish to say that I have studied the plans of both these men whom I hold at the head of all the list in the central west and west. Dr. Majors has been a personal adviser while Dr. Sansum only by his writing. Study both of them and arrive at your own conclusions.

#### SUMMARY

All treatment must be figured upon a caloric value. Patients in bed, adults, must have at least 1000 calories and increase as per the size and amount of labor one is doing. The average working man needs about 3500 calories. Frigid explorers need 8000. Foods are based upon the kilo weight of the body, which is the weight in pounds divided by 2.2. We need twenty to forty calories per kilo. Protein is absolutely essential and we must have not below 1.5 grams in children or less than two-thirds grams in adults per kilo. A 110 pound person weighs fifty kilos so he must have 50 grams protein, a greater amount will usually not make trouble if kept within reason and based upon conditions of patient.

Carbohydrates yield 100 per cent sugar, each gram has 4.1 calories.

Proteins yield 58 per cent sugar, each gram has 4.1 calories.

Fats yield 10 per cent sugar, each gram has 9.3 calories.

Therefore a maintenance diet for 50 kilos is:

Protein, 50 grams which is practically 200 calories.

Carbohydrates, 100 grams which is practically 400 calories.

Fat, 45 grams which is practically 400 calories.

You will note that two carbohydrate grams practically equals one gram of fat



in caloric value and that while the weights are two to one the caloric values are practically equal. It seems preferable to give the increased amount in carbohydrates and cut the amount of protein and fats below the average diet arrangement, thereby reducing the tendency to acidosis.

Insulin takes care of two and one-half to three grams of sugar per unit, or two grams of protein or 1.5 grams of fat per unit. Without doubt, it acts some on all these at the same time. As we have shown, we can take away 100 grams of fat and add 130 grams of carbohydrate without additional insulin. So an insulin unit nearly averages caring for two grams of food, when based upon the two to one ratio.

The highest sugar content is in the early part of the day, therefore the first doses of insulin should be much larger than later in the day, because now the blood insulin is low. Insulin shock or hyperinsulinism is most frequently in the afternoon and early portion of the night. Insulin will abate ketosis alone, but is much more efficient when given with carbohydrates. Fat oxidizes slowly and must have sugar to burn it.

Every patient should take not less than eight glasses of water per day. Don't let a small amount of urine with high sugar content fool you, for the urine test should be approximated upon a secretion of 2000 cc. whole day voiding, however, food may be based somewhat on each voiding. Acidosis patients must have insulin and glucose, so we give them freely carbohydrates with insulin, until they are able to retain other foods, then begin to cut the carbohydrates to the place desired, and then begin to cut the insulin until you get the diet balance desired.

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### A Visit To Medical Clinics In Europe

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On a recent trip to Europe, I had the opportunity of visiting several medical centers and of exchanging opinions with some of my professional friends whom I had not seen for six years. After returning to this country, I found there was so

much interest in medical conditions as they exist in Europe, that a report of my impressions seems justifiable.

One of the main objects of my trip was a visit to the Radium Institute of Paris, which is regarded as the most important cancer institute existing today in Europe. This is situated in the neighborhood of the famous Pantheon where the great thinkers of the French nation are buried. It contains a laboratory where Madame Curie carries on physical and chemical research work, and has a department for the treatment and study of cancer under the direction of Professor Regaud who has at his disposal seven grams of radium and six powerful x-ray machines. In addition there are laboratories for pathology, bacteriology, hematology, each one directed by full-time men.

Biopsy is done routinely and the pathological report is awaited before treatment is started. The pathologist is regarded by Regaud as an indispensable collaborator of the radiotherapist. Since radiosensitivity depends greatly on the histological character of a tumor, the radiotherapeutic technique is influenced frequently by the histological diagnosis.

With the Radium Institute are connected an excellent secretarial service and a competent staff of visiting nurses. The patients are seen over a long period following the treatment, until all possibility of recurrence is past. For instance, if it is a case of cancer of the breast, every patient even though apparently cured, must be reexamined once a year for ten years. This follow-up system and the histological examination of every case guarantees the recognized reliability of Regaud's statistics.

Operable cases of epitheliomata of the skin under radium therapy produce over 90 per cent cures. Early cancers of the cervix yield the same proportion of successes under surgery as under radium therapy. But the latter cures many cases that are inoperable. In cancers of the mouth and tongue the results of radium therapy are superior to those of operative treatment. In cancers of the glandular tissues, radiotherapeutic methods have been much less favorable. Cancers

of the breast, so long as they are operable, should be operated upon and in cancers of the rectum, internal radium therapy has resulted, according to Regaud, in only a small number of cures, as compared with a large number of painful burns.

In Germany, special cancer-institutes are not popular. Only a few larger cities, as Berlin, Frankfurt, Munich have special clinics, which offer all modern conveniences for the surgical and radiation treatment of cancer, but most of the cancer patients are admitted in general surgical or gynecological hospitals where an assistant is charged with the scientific work of the cancer problem. Comparing the Cancer Institute of Berlin with the great center in Paris, one realizes that the world war left the whole of Germany financially embarrassed. She has but recently been able to buy radium in sufficient quantities. As a substitute, mesothorium is frequently used, the radioactivity of which decreases quite rapidly and deep *x*-ray therapy plays a much larger role than it does in France. The most modern and complete *x*-ray institute is directed by Dr. Holfelder of Frankfurt who visited this country several years ago and supervised the installation of German *x*-ray machines in the Cancer Institute of Buffalo, N. Y.

Most of the German clinicians believe that today surgery is still the method of choice in operable cancer and that radiation should be limited to the postoperative treatment and to inoperable cases. And all agree that cancer will never be controlled with the therapeutic agents we have today, but that through laboratory research there must be found the cause, prevention and cure of cancer.

I visited several laboratory investigators devoted to the study of cancer. In Fraenkel's Institute in Berlin, I saw the cultures of the famous *bacillus tumefaciens* which is considered by Blumenthal as a cancer producing agent. Warburg of the Kaiser Wilhelm Institute has introduced a new experimental method in the study of the etiology of cancer. His work on the metabolism of tumor cells is regarded as so promising that recently the Rockefeller Foundation

donated the sum of \$640,000 for the erection of a special laboratory where Prof. Warburg will be allowed to continue his research work. Warburg demonstrated large quantities of lactic acid in cancer tissue by means of a manometric method and explains it by the abnormal ability of cancer to split sugar to lactic acid. Fischer-Wasels, the well known authority on cancer in Frankfurt, applied Warburg's discovery to the treatment of malignant tumors. He reported surprising results in animal and human cancer, by exhausting the tumor with overbreathing.

I asked several authorities whether the various serological methods for the diagnosis of malignant tumors—as those of Boyksen, Freund-Kaminer, Abderhalden, Kahn—have a practical value, but all agreed that these serological tests are unreliable for diagnosing incipient cancer, because of their non-specificity. In doubtful cases, at present the only reliable diagnostic method is the histological examination. The value of biopsy being recognized, more theoretical objections have been raised by those who fear that biopsy would give a good chance of mobilizing tumor cells or of implanting them in the wound. Anschütz of Kiel, however, has shown, by comparing the operative results in patients with and without biopsy prior to the radical operation, that such apprehensions are unfounded.

Refinement in the microscopic technique to the point of certainty in tissue diagnosis seems therefore the most urgent problem. Lipschütz of Vienna believes that he has demonstrated a specific morphology in the cancer cell by his method of using Giemsa stain. His results, however, are not applicable to frozen sections. Biopsy and the use of frozen sections during operation are not as widely used in Europe as in America. Not any of the German and French clinics which I visited used the Wilson method of staining unfixed frozen sections with methylen blue. There are several reasons for it. The pathological institute of the larger German hospitals is as a rule far away from the surgical department and its tremendous work—



1000 to 2000 autopsies a year—keeps the pathologist so busy that he has no time to go to the operating room and cooperate personally with the surgeon, in arriving at a histological diagnosis during operation. Therefore the surgical specimens are mostly diagnosed by a surgical assistant who has had one or two years of pathological training but who is, of course, more interested in the technical side of surgery. He will leave the rotating service in the surgical pathological laboratory, before he has acquired a wider experience which is indispensable especially for the diagnosis of frozen sections. This present custom of burdening a young surgical assistant with the responsibility of diagnosing surgical specimens, especially biopsy material, was criticised recently by the celebrated Robert Meyer, who holds the only German full-time position of surgical pathology. He requires that the larger surgical hospitals have their laboratories under the direction of a full-time pathologist with long experience in this special line.

Before the war, the large German pathological institutes were known the world over as offering the most splendid opportunities for work. The horrible depression of 1920 to 1923 during the inflation of the mark, brought with it economic chaos not only to the majority of people but also to the scientific institutes. Today they are again well organized and equipped with the best working facilities. In Munich, a new pathological institute is built which is outstanding not only in its equipment, but also in its architectural beauty. When I visited the famous pathological institute of Berlin, which was organized by Virchow, it just underwent a thorough remodeling under its new chief Roessle.

The head of the pathological department at the Virchow Krankenhaus, Berlin's largest hospital, Dr. Anders, also a pupil of Asehoff, invited me to one of the pathological conferences which are held daily at the conclusion of the practical work. On this one forenoon, there were eight autopsies performed and at the conference the staff and the visiting clinicians had the opportunity of viewing

all the material which was presented by the chief pathologist. The number of autopsies in this institute averages 80 per cent of the institutional deaths, or 2000 cases in one year.

A visit to the Medico-legal Institute of Berlin was also very instructive. In this, during last year, 900 autopsies of legal cases were performed. It contains besides chemical and histological laboratories a large collection of medico-legal specimens for the teaching of the so-called district physicians. The latter are officials of the state, who serve as health officers and as coroners. Laymen are not admitted to the coroner's office which is organized entirely along medical lines.

In Sauerbruch's large and busy surgical clinic one does not notice the economic depression, so general in Germany. The second floor of the building has a new and beautifully equipped operating room which contains three tables and three teams of assistants are rushed keeping up with him. The third floor is devoted to large laboratories for histological and chemical research and operating rooms for experimental animals. The private rooms and wards have colorful furnishings and the walls are decorated with modern oil paintings. Sauerbruch's original work on lung surgery has gained him international reputation. His phrenicotomy and thoracoplastic operation for unilateral tuberculosis of the lungs are accepted as standard methods and these operations save 35 to 45 per cent of patients who cannot be cured by any other treatment. I saw Sauerbruch perform a resection of one whole lobe of the lung for non-tuberculous bronchiectasis and he reported about 45 lung resections with only two deaths. In a case of intrathoracic goiter he removed the large adenoma after splitting the sternum in the midline. Being more than a mere operator Sauerbruch tried out lately a special diet for his tuberculosis cases which proved very valuable in tuberculosis of the skin and the bones. In this diet sodium chlorid is withdrawn and protein intake limited.

Most of the German hospitals are state or municipal institutions and only



very few are owned by physicians or charitable societies. They have a closed staff, consisting of a department head and a large number of assistants. The chief has in addition to a large salary, the privilege of charging for his treatment of private patients. The latter occupy about 7 per cent of all hospital beds, most patients are insurance cases. In conversation with practitioners I learned that private practice amounts today only to one-tenth of that before the war, since national insurance is compulsory almost to everybody. Ninety-five per cent of all German practitioners depend financially entirely on the national insurance. There is the general opinion that this form of medical socialism is not only very uneconomical, but that the present system of health insurance together with the dole system for the unemployed weakens the desire to work in millions of men, putting idleness and hypochondria on a national subsidy basis.

From Berlin I went in four hours to Dresden, the capital of Saxony, to visit the International Hygiene Exposition, which was the greatest attraction in Germany this year. The center of the large territory is devoted to the Hygiene Museum which will stay as a permanent institution, the only one of its kind in the world. On its main floor, exhibits of embryology, normal anatomy and physiology of the human body are demonstrated to the lay public by means of beautiful pictures, wax models and anatomical specimens. Hordes of school children, college students and people from all parts of the world studied this unique and complete museum. I was fascinated especially by the collection of human organs made transparent by Spalteholz's method, showing the blood vessels by injection of colored material. I never realized before the vast blood supply of the kidneys, the heart and the thyroid gland. The second floor of the magnificent building is devoted to demonstration of the etiology, route of infection, prevention and pathology of the common infectious diseases. Here the same lucid method of using pictures, tables, photo-

graphs and specimens is used for instruction of the public.

In the Hygiene Exposition proper, most of the civilized nations had their own buildings. I was mostly interested in Dr. de Quervain's exhibit on goiter and cretinism in the Swiss pavilion. There was a collection of about 100 surgical specimens representing the different forms of the Swiss goiter. It was apparent that the latter differs widely from the American goiter. The diffuse colloid and exophthalmic goiter, which are the two most common types of goiter in this country, are very rare in Switzerland, whereas the large fetal adenomas prevail. In the German section, all phases of practical hygiene were represented concerning nutrition, domicile, climate, sport, etc. One large pavilion was devoted only to the hygiene of mother and child. There was also a complete hospital constructed with model operating rooms, Roentgen—and physiotherapy—departments, laboratories, patients rooms, kitchens. One building contained all facts on national health insurance and compensation after accident.

Anything having a relation to hygiene is exhibited with a completeness that is amazing and one wonders only how this exposition could be financed, in a time where the cities have to squeeze out every cent for the upkeep of municipal necessities. The tremendous sacrifice can be explained only by the belief of the people of Dresden, that a hygiene exposition is no luxury, but an institution of greatest educational value to everybody.

I departed from Europe with the impression left on my mind, that despite the miserable economic conditions which prevail, and despite the grave outlook of the country as a whole, there was no noticeable diminution of scientific energy and spirit.

—R—

What puzzles us about the dinosaur, after following the dispatches for a time, is the trait of leaving its thigh-bones in Arizona and its eggs in Mongolia.—Detroit News.

✱ ✱ ✱

Jack—Gladys married a self-made man, didn't she?

Nancy—Yes, but she was compelled to make extensive alterations.

**On the Relation That May Exist Between  
the Mortality from Enlarged Prostate  
In Marine and In Inland Localities**

E. H. S. BAILEY, Ph. D.

Emeritus Professor of Chemistry, University of  
Kansas

In the examination of the statistics of mortality in what the Public Health Service calls "diseases of the prostate" it is possible from the U. S. Census (1921) and State Health reports to obtain some interesting figures.

We know from a study of the prevalence of goiter in certain localities that the absence of iodine in the soil and water of some regions seems to be related to the prevalence of this disease. It is well known that in the State of Michigan, for instance, there is very little iodine in the soil or in the water, and goiter is very common; so it has even been proposed to mix minute quantities of potassium iodide with the commercial table salt (NaCl) put on the market. At present, opinions differ as to the advisability of this course.

Little is known in regard to the relation of diet, water supply, soil or altitude as affecting the prevalence of "diseases of the prostate," another disease where glands are involved; so any light that may be thrown on this problem may be of value.

From mortality statistics it is shown that the mortality is greater in cities than in rural districts. This is possibly due to a more accurate diagnosis in the cities than in the country. The Bureau of the Census reports the annual average in the "registration area" for the last twenty years as showing a gradual increase as expressed in death rates per 100,000 of population from 2.6 to 5.3. The highest death rate is found in Kansas 6.3 (cities 7.9, rural districts 5.8) with Minnesota also among the highest, and the lowest death rate is in South Carolina 2.00 (cities 6.7 and rural districts 1.5) with North Carolina and Delaware also low.

It occurred to the author that there might be some relation between the mortality in the so-called "marine" states and those in the "interior." The states in the "registration area" were classi-

fied, showing 19 states bordering on the ocean or large rivers near the salt water, and 15 in the interior.

For a single specified year the average mortality was:

For the marine state.....3.62

Inland .....5.02

For total U. S. ....4.30

Unfortunately, no satisfactory statistics could be obtained for 14 states.

It must be admitted that an examination of this kind should cover 10 to 20 years to eliminate the high and low figures of different years and, as has been suggested to the author, it would also be much better if we had "specific ratios to include only the male population comprised within the limit of the age of the earliest death and the oldest." The figures given, however, may have some significance which is more than accidental.

In those states bordering on the seashore a large part of the area is at a considerable distance from the salt water. At present it has been possible in only two states to study this factor.

The author was fortunate enough to obtain for the year 1927 the death rate in each county of Connecticut. There are 8 counties, 4 of which border on the shore of Long Island Sound. Death rate for the inland counties was 7.1. Death rate for the marine counties was 4.8. In the case of the state of Maine, the inland population (a little more than half that of the state) gave a death rate of 6.2, and the marine death rate was 3.1. The food supply of those who live near the ocean, or who are within easy transportation distance from it, naturally comes to quite an extent from this source.

A study of these statistics leads, therefore, to the hypothesis that in some way, either from the food or water used, the inhabitants of the marine districts, as compared with those living in the interior, show less liability to suffer from diseases of the prostate or that the growth of the gland may be retarded.

Is it not possible that some element or substance in sea water, be it iodine, bromine, fluorine, or some rare compound, which is absorbed by the marine fauna, which are used as food for man,



may be this inhibiting substance? It would not be safe to cast aside such a suggestion when we consider, for instance, the infinitely small quantities of certain vitamins, of which we do not yet even know the composition, that have the power to modify the growth and change metabolism in the human body. The function of several of the glands of the body is not yet fully understood, and there is much to be learned in regard to the action of diet on the human body, so with these two "variables" the problem becomes still more intricate.

—R—

### Report of Staff Meeting

R. McE. SCHAUFFLER, M.D., Kansas City

Research Hospital, May 8, 1930

The total number of deaths in the hospital in April was 17. Autopsies were obtained on 11 of the cases. The following were especially selected for discussion:

1. A case on the service of Dr. Walter Holbrook in which death followed a clean abdominal operation which was found post-mortem to be a gas bacillus infection of a most unusual type. The patient, a male 39 years old, had just completed an examination in the Diagnostic Clinic. He had complained of stomach trouble for years and had occasionally had severe pain at the end of the sternum or under the right rib margin or in the right scapula. He had never been jaundiced. Because of the repeated failure of the gall bladder to visualize, the diagnosis of gall bladder disease was made and operation advised. The operation was performed by Dr. Holbrook, the appendix removed and the gall bladder cleaned out of tarry material and small stones and drained. On the day after operation the patient had a rapid pulse and temperature of  $102.6^{\circ}$  and was restless and complained much of pain. The morning of the second post operative day a hard, red, tender area was noted in the right groin. This was soon followed by swelling along the spermatic cords, in the scrotum and in the left groin with tenderness in the left abdominal wall. The general condition of the patient was alarming. Late in the sec-

ond day a black area appeared in the scrotum. No crepitation was noted. The abdominal incision did not open and there was no odor noticed. The patient died sixty hours after operation.

Autopsy report by Dr. E. T. Johnson. When the sutures were cut in the surgical incision the wound gaped open and considerable fluid of a raspberry juice appearance came out under some pressure. There was a moderate degree of general peritonitis. The gall bladder tube was firmly in place and the appendix suture seemed firm, although there was infiltration of the tissues about. There was much infiltration in the inguinal canals and scrotum. Smears show gas bacillus organisms and colon bacilli.

The case was discussed by Drs. Holbrook, Johnson and others. The consensus of opinion was that the infecting organism was in the appendix stump and began to grow in the crushed area at the site of ligation, spreading under the peritoneum and also into the abdominal cavity.

Dr. E. F. Robinson reported a case of tetanus after a clean appendix operation. He had looked up the literature and found that a number of such cases had been reported and that Dr. Matas of New Orleans had adopted a rule of having patients in the hospital several days on a diet of cooked food in order to lessen the danger of tetanus following rectal operation.

Dr. R. M. Schauffler reported a case of the more common type of gas bacillus infection which had recently occurred in his service at the General Hospital. The patient had suffered a comminuted T fracture of the lower femur with a small puncture through the skin. At the end of 36 hours the patient's condition became alarming with swelling and crepitation in the lower thigh. There was a very foul odor. The lower thigh and knee were opened very freely and the anti-toxin given. In 48 hours it was necessary to make openings higher in the thigh. At this time a long aspirating needle was connected by stout tubing with a tank of oxygen and the tissues in all directions were extensively infiltrated with oxygen.



After making due allowance for good luck, Dr. Schauffler was inclined to credit the recovery of his patient to the creation of an extensive oxygen emphysema in addition to the usual treatment.

2. The case of a 2 year old child who had died from ischio-rectal abscess was presented by Dr. H. C. Berger. The child had had a temperature of 104° or more for eleven days with no other symptoms except frequent foul watery stools. These improved under treatment, but the fever continued. On the 12th day a hard mass appeared in the left buttock. This became larger and softer and was incised on the 14th day and much pus evacuated. The child died suddenly four hours later with symptoms suggestive of embolism.

The autopsy report by Dr. Johnson showed free thin pus exudate in the peritoneal cavity. Exploration of the abscess cavity from below showed that it had no connection with the rectum, but led upward to the right and in front of the uterus and behind the bladder close to, but not through, the peritoneum. Serial section showed infiltration of round cells all through this partition, but nothing to show which way infection had passed. Cultures from the abscess showed streptococci. Post mortem cultures from the peritoneum and the blood also showed streptococci.

In the discussion that followed opinion was divided as to whether this was an ideopathic streptococcus peritonitis or a migration from the bowel or a passing of infection upward from the abscess.

3. Dr. L. S. Milne presented a case of death from kidney stone and pyelonephritis. The patient was a male, age 56 years. The striking feature of the case was that all the patient's complaints were referred to the gastro-intestinal tract. For six months he had been complaining of digestive disturbance and for two months had been vomiting frequently, at times vomiting blood. He entered the hospital with a tentative diagnosis of carcinoma of the stomach. He had achlorhydria, but the x-ray examination was not convincing for carcinoma, although there was delayed emptying. As soon as the laboratory reports were in, the kidney trouble was obvious, as

there were many pus and blood cells in the urine and the non protein nitrogen was 120.

The patient died three days after admission.

The important findings at autopsy were impacted stone in the right ureter with hydro-ureter and hydro-nephrosis and several staghorn stones in the left kidney with multiple abscesses.

The discussion by Dr. Milne, Dr. W. A. Myers and others centered on the occurrence and cause of vomiting as a prominent symptom in some cases of kidney or ureteral stone and other kidney lesions. A case was recounted where a patient had frequent headache with severe vomiting for several years. These were considered to be migraine, but after the discovery and removal of a ureteral stone, the headaches disappeared. Several other cases of kidney stones were referred to where the gastric symptoms had been prominent. The impression was that these could not all be accounted for by uremia, or at least not by the severe disturbance to which this name is usually applied, but that there might be mechanical or reflex causes of vomiting from intermittent ureteral obstruction.

4. A very puzzling case was next presented by Dr. Franklin E. Murphy. The patient, a woman of 37 years, had been admitted to the hospital April 16, and died a week later. In early January she had had three teeth extracted. About a week later a general arthritis developed with fever. Most of the larger joints were affected, with remissions and exacerbations. The patient also developed an acute nephritis. The joint symptoms had subsided a week before her admission, but fever continued and she had occasional attacks of pain and vomiting suggestive of gall bladder disease. On admission the urine showed a light cloud of albumin and was loaded with red and white blood cells. She ran a typical septic temperature. The physical examination was largely negative. A tender cervical gland about the size of a hickory nut was noted below the angle of the jaw and slight enlargement of other cervical glands.

Blood cultures taken on the first three days in the hospital were negative. Those taken on the following days were positive, but some only on sub-culture, so that a positive diagnosis of staphylococcus aureus bacteraemia was only made a few hours before her death.

Autopsy report by Dr. Johnson. The gross examination of all the viscera showed no major lesions except incipient pneumonia with a suggestion of thrombi in small vessels of the lung and tiny foci in the kidney which appeared to be septic emboli. Exploration of the neck showed a partly necrotic lymph node with a small abscess adjacent. In the neighborhood were found medium sized blood vessels somewhat remotely placed from the necrotic infected gland presenting a lumen more or less completely filled by thrombus laden with bacteria.

Dr. F. C. Narr called attention to the similarity of this case to one recently studied where death had followed a tonsil operation. Septic thrombi were found in the adjacent small vessels of the neck. Some of these were loosely clotted and loaded with bacteria and it seemed probable others had been washed into the blood stream and carried to the lungs, where there were recognizable emboli and that bacterial emboli had gone on to other tissues.

In the general discussion of Dr. Murphy's case by Drs. E. F. Robinson, Kerwin Kinard and others, special attention was called to the increase in the number of fatal cases of sepsis following extraction of teeth, which appeared in the casualty reports of Research Hospital in the last few years. It was contended that the extensive curetting of the teeth socket and adjacent bone was bad surgical practice. The custom of curetting and then suturing the gum was condemned. It was considered that the substitution of local anesthetics for gas in extractions might be undesirable, but the main criticism was against the practice of dental surgeons of vigorously stirring up a septic area and thus opening new portals to infection.

The report of a clinical case from the hospital was made by Dr. Lindsay S. Milne:

The patient, a woman 46 yrs. old, was admitted April 5, 1930. Fifteen days before she had a sore throat, two days later onset of otitis media. Drum puncture was done on the following day with great relief. A day later, eleven days before admission, she developed facial erysipelas; the first redness being noted at the tip of the nose and spreading over the face. She was treated with moist packs and the specific serum. Two days later she developed marked edema of the left lower limb with slight thigh tenderness, apparently a phlebitis. The erysipelas had entirely disappeared on admission to the hospital and the edema of the lower leg was less. The patient was running a septic temperature.

Blood culture was negative. Physical examination was negative for any lesion of heart, lungs or other viscera. The hemoglobin was 40 per cent, R. B. C. 2,900,000, W. B. C. 11,000.

In the absence of any other findings Dr. Milne suspected that the veins in the leg might be filled with pus. He said that septic thrombosis after erysipelas was especially prone to softening and recounted a case with severe sepsis and no local findings except edema and slight tenderness in which needle punctures showed pus the whole length of the long saphenous vein and in other superficial veins and a large number of small incisions resulted in the recovery of the patient. Dr. Milne made several needle punctures of veins in the case under discussion, but found no pus.

After three weeks in the hospital there was no change in the temperature course or the physical examination except that the patient had great tenderness about the knee and could not bear to have the limb moved. Suppurative arthritis of the knee was suspected, but there was so little increase of fluid within the joint that the diagnosis was too doubtful to justify operation. The whole thigh was enlarged, but there was no hard swelling anywhere and no fluctuation could be made out.

x-Ray continued negative for any bone lesion. Four days later a needle was introduced deep in the anterior aspect of the thigh above the middle and pus



withdrawn. Incision was made under local. After division of the deep fascia scissors were carried through the quadriceps and opened and a large amount of pus escaped. At operation a few days later pus was discovered in a large flat layer which included all of the anterior and inner thigh, the inner side of the knee, the popliteal space and the upper third of the calf.

Dr. Schauffler recalled a similar case in which the acute onset was two weeks after a confinement from which the patient had apparently recovered completely. Bacteraemia was suspected but blood cultures were negative. Then septic phlebitis with only slight circulatory obstruction was suspected and later periostitis or osteomyelitis, on account of thigh pain. The septic temperature continued and all examinations were negative. After a month a tender swelling appeared over the knee. Superficial puncture showed pus and septic arthritis was diagnosed. Dr. Schauffler was called to open the knee, but instead made an exploratory incision in mid-thigh and found a condition similar to that reported in Dr. Milne's case.

Dr. Schauffler called attention to the fact that the pus in these deep thigh abscesses finally worked down about the knee, here coming close to the surface. He felt that with his experience he ought to have urged exploratory punctures in Dr. Milne's case as soon as he was called in consultation. He felt that in a hospital like the Research where repeated blood cultures almost always gave positive findings in subacute bacterial endocarditis and in bacteraemia from any cause, that with negative cultures and symptoms of some trouble in the thigh early exploration of the veins and of the deep tissue planes should be made.

—R—

### Eye Injuries

L. A. LATIMER, M.D., Alexander, Kan.

Read before the Rush-Ness County Society, Nov. 25, 1930.

Eye injury in general practice is an emergency which calls into action the resourcefulness of the physician consulted, who must act with great promptness and decision.

According to Stanford one-twelfth of all injuries are to the eye, and one-tenth of all blind people lose their sight by accident. Thus it can readily be seen that the care of an injury to the eye is one of the important acts of the general practitioner.

Injuries to the eye may be classified as penetrating and non-penetrating. Even very slight injuries to the cornea may cause a severe inflammation with resulting iritis, iridocyclitis, ophthalmitis and loss of the eye.

Most inflammations of the eye are caused by the introduction of micro-organisms therein, the virulence of the inflammation depending upon the site of the injury and the number and virulence of the bacteria. Pneumococci and streptococci produce a very severe reaction.

A patient presenting himself with an inflamed eye should be placed in a position where a good light may be thrown into the eye, and it should be carefully examined for small abrasions of the cornea, or for small foreign bodies imbedded therein. Only a very slight injury may show upon the cornea and still it may be a perforating wound. Attention should be paid to the following signs in looking for perforation of the eye ball. The pupil is irregular or pear shaped in outline, the anterior chamber is empty, the iris is usually prolapsed through the wound in the cornea. A slight prolapse of the iris may be difficult to see, however, if the pupil is pear shaped it is a sure sign the iris is caught in the opening wound of the cornea. Even in perforating wounds of the eye if no infection appears and the lens is not injured good vision may be retained. The location of the injury is very important, as injuries to the sclera in the region of the ciliary body are extremely dangerous, for even many years later you may have a detachment of the retina and blindness. This condition is caused by the formation of fine connective tissue and the contraction of this scar tissue pulls the retina away from the choroid. Perforation may be into the anterior chamber only and infection limited to this region, or the vitreous may also be infected. If the anterior chamber



only is infected a purulent iritis with hypopyon and greenish discoloration of the iris follows. Owing to its absence of blood vessels the lens and vitreous offer a good nutrient medium for bacteria. If the vitreous becomes infected there will be no immediate appearance of inflammation, for the reason that the toxic substance cannot act directly upon the blood vessels and it is only when toxins have diffused through the vitreous and act on the membrane that the inflammation starts. Thus one should bear in mind that an injured eye may be in a dangerous condition even though it show no immediate signs of inflammation. If in place of a jet black pupil a grey reflex is seen a diagnosis of traumatic cataract can be made. In these circumstances the eye is in a serious condition and a great deal depends upon the first aid treatment given. Be careful not to handle the eye unnecessarily, do not use strong irritating antiseptics. A 10 per cent to 15 per cent solution of neo-silvol should be freely used. If the iris is prolapsed toward the center of the cornea a 1 per cent solution of atropine should be instilled. However, if the prolapse is at the periphery of the cornea a 1 per cent solution of eserine should be used. The object is to replace the iris into the anterior chamber by pulling it free from the margins of the wound. Do not try to excise the prolapsed iris unless you are especially prepared to do so as the operation is not as easy as it looks and great harm may be done.

When the eye ball has not been perforated observe the following signs: The anterior chamber is full, the tension is normal, the pupil is circular and responds to stimulus of light. In this case instill neo-silvol and apply a compress bandage. In these cases the injury to the cornea is usually extensive and deep and there is considerable danger of defective vision due to opacity of the cornea. The most serious danger, however, in this class of cases is from sepsis. Rest is essential to the smooth healing of all injuries, and as atropine is the physiological splint it is a wise procedure to instill a 1 per cent solution after using neo-silvol. The timely use of atropine is

our best preventive treatment of iritis with all of its serious complications. Atropine, however, is a drug which should be used with great care, and one should make sure there is no glaucoma present before instilling atropine. Gently test the pressure of each eye ball with the palpating fingers upon the closed lids, and if the inflamed eye seems hard it would be well to postpone atropine until glaucoma could be definitely excluded, otherwise disastrous results may be obtained.

After all the important thing in the emergency treatment of the eye is toward preventing infection. Many an otherwise simple case of foreign body or slight abrasion of the cornea has become a serious ulceration of the cornea with its resulting iridocyclitis, hypopyon and ophthalmitis simply by inattention to little details which might have prevented infection.

A 2 per cent solution of butyn for pain, attention that all instruments used are sterile, cleaning the hands as carefully as for a surgical operation, the timely use of neo-silvol and mercurochrome, and the placing of a sterile gauze dressing on the eye to prevent the patient from wiping the eye with a soiled handkerchief, will prevent a large part of the serious complications of eye injuries, and help to decrease the percentage of blindness from accidental injuries to the eye.

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### TUBERCULOSIS ABSTRACTS

The literature on lung abscess, dating back to Hippocrates' times, abounds in contradictions and discouragements. In most cases of lung abscess, the etiology is difficult to trace, the symptoms and physical signs are misleading, the prognosis is pessimistic, and the treatment is unsatisfactory. Surgical measures have not, in general, proved to be a boon. However, the results of 35 cases of non-tuberculous abscesses of all kinds, observed by H. I. Spector of St. Louis, warrant a more optimistic outlook and sustain the value of conservative, harmless, medical regimen. Abstracts of Dr. Spector's paper follow.

## LUNG ABSCESSSES

Early literature emphasized pneumonia as the cause of lung abscesses. Only recently has it become recognized that lung abscesses are a rare sequel of lobar pneumonia, occasionally follow bronchopneumonia, and most often follow operations of the upper respiratory tract. Some observers believe that abscesses may be primary and may, in fact, be preceded by a primary stage of pneumonia.

## ETIOLOGY

Whether the causative organisms gain entrance into the lung by aspiration or through the blood by means of an embolus is under dispute. Perhaps a combination of the two processes will explain certain obscure cases. Chronic infections in the upper respiratory tract and the retention in the lungs of certain anerobes ordinarily found in the mouth play a role in etiology. Experimentally anything that tends to abolish the cough reflex in anesthesia, or to increase the cough after anesthesia, seems to favor the production of abscesses.

## TYPES

Lung abscesses may be acute or chronic; single, bilateral, or multiple; and may be situated in the hilar region, in the center, or the periphery of the lung. Lower lobes seem to be more frequently involved than upper, and the right more frequently than the left lung.

## SYMPTOMS

Obviously, a disease of such variable etiology and pathology will manifest a

multiplicity of symptoms. Chills, pain in the chest, dry paroxysmal cough followed later by profuse expectoration of foul odor are common. A septic temperature, rapid pulse, and high leucocyte count are usually present. Night sweats, loss of weight, and hemoptysis are a part of the clinical course. Clubbing of the fingers is usually seen in chronic cases. Elastic tissue in the sputum is not common.

## PHYSICAL SIGNS

The physical findings depend upon the location and size of the abscess and on whether or not rupture has occurred. Centrally placed abscesses present few signs; peripheral ones, if large enough, may give rise to scattered, fine or medium rales. After rupture, signs of cavitation, such as bronchial breathing, medium and coarse rales, and whispering pectoriloquy may be elicited. Generally speaking, the symptoms are out of proportion to the physical changes, the most constant of which is dullness on percussion and a diminution of breath sounds.

A detailed history as to etiology and mode of onset is important. After rupture of the abscess, the diagnosis is relatively simple. Multiple abscesses too often remain unrecognized until after autopsy.

The roentgenogram is indispensable. In the early stage, the abscess is frequently seen as an acute, irregular consolidation, not characteristic in appearance, and may resemble a pneumonic tuberculous consolidation, interlobar empyema, or a new growth. After rupture, if the cavity is partially filled with secretion, a fluid level with a rarefied area above may be seen. If completely filled, one cannot distinguish between the infiltration and the fluid. An extensive zone of congestion may surround the abscess.

## PROGNOSIS

Early diagnosis offers a more favorable prognosis. The prognosis will depend upon the cause, the type, the location, and the duration of the abscess. Those following inhalation of foreign bodies have a good prognosis. Solitary abscesses offer more encouragement than multiple, and apical and hilar ab-

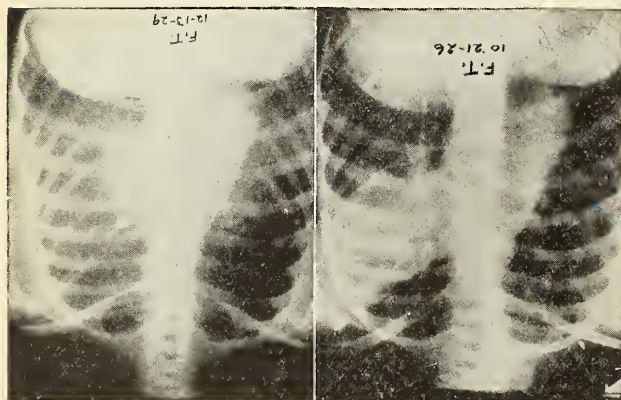


Fig. 1.—Solitary lung abscess with fluid level in upper part of right upper lobe.

Fig. 2.—Same case about three years later. Evidence of abscess absent; patient in good health, attending school.



scesses have a better outlook than central or peripheral ones; acute abscesses are more hopeful than the chronic. The character of the treatment, of course, definitely influences the prognosis.

#### TREATMENT

Until recently, surgery has occupied a prominent place in the treatment of lung abscess. The results obtained by medical treatment were disheartening; mortality ranging from 60 per cent to 100 per cent has been reported by good observers. More satisfactory results of medical treatment recently reported have simulated a renewed interest, and the pendulum seems to be swinging toward conservatism; though radical surgery in modified form still occupies a prominent place. Bed rest, diet, and postural drainage are used by many surgeons as a preliminary measure to radical treatment. Artificial pneumothorax, vaccine and drug therapy also have their advocates.

The author's treatment in 35 cases consisted of complete bed rest during the acute stage, postural drainage several times a day (frequency and length of time depending on the patient's tolerance), and a soft but nourishing diet. Patients were encouraged to expectorate. Pneumothorax was attempted if improvement did not take place within a reasonable length of time. Radical surgery was resorted to in one case in which pneumothorax had failed. Bronchoscopy, transfusions, and arsphenamine were used twice each in different cases and as a last measure in hopeless cases.

After subsidence of acute symptoms, the patients were discharged but continued treatment at home and reported for observation at the out-patient clinic. Prolonged bed rest was stressed. In fact, lung abscess cases are treated like active, and later quiescent, cases of tuberculosis, and patients are not permitted to return to work until evidences of pathologic changes can no longer be revealed.

With the exception of one patient who could not be traced, all of the cured patients have remained well. Four of the improved patients could not be found and these failed to co-operate.

An analysis of the results indicates that the prognosis is much better in solitary than in multiple abscesses, since 89.6 per cent of the former were either improved or cured, while 100 per cent of the latter had a fatal ending.

#### SUMMARY OF CONCLUSIONS

Among the conclusions are:

All acute lung abscesses are primarily medical, a contention supported not only by the results quoted but also by the statements of other authors that operation during the acute phase of abscess carries with it a mortality of from 65 to 70 per cent.

Acute single lung abscesses and some chronic abscesses are usually amenable to medical treatment alone.

Radical surgery is definitely indicated only in cases in which the patient does not get well after a reasonable period of conservative "management," in peripheral abscesses that do not drain well, in long standing chronic cases, or, occasionally, in multiple abscesses limited to one lobe.—*Lung Abscesses, H. E. Spector, Jour. of the A.M.A., Sept. 13, 1930.*

—R—

#### Possible Death from Drinking Ethylene

##### Methods of Favoring Bile Drainage

Proprietary mixtures containing phenolphthalein, acid sodium oleate, salicylic acid and menthol had much vogue some years ago. This was an attempt to combine the experimentally demonstrated stimulants to bile secretion (salicylic acid and menthol) with the bile expelling effect of fatty acid (quantity probably entirely inadequate) and the laxative action of phenolphthalein. The Karlsbad treatment, consisting of the ingestion of hot alkaline laxative mineral waters, is another way of aiming at the same result, which has centuries of favorable experience in its favor. Either the natural or the artificial Karlsbad salt (N.F.) may be taken by the teaspoonful to a tumblerful of hot water half an hour before the larger meals. (J.A.M.A., June 7, '30.)

—R—

Insanity is said to be decreasing. Maybe it's because so many things that used to be considered crazy aren't any more.—*Arkansas Gazette.*



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - - Editor**

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### LEGISLATIVE POSSIBILITIES

It is almost certain that an effort will be made during the coming session of the legislature to repeal the laws regulating the practice of medicine. That the legislature will contain a number of unfriends of the medical profession is certain and that such unfriends will support such a bill is to be expected. They believe that the repeal of these laws would be in the nature of retaliation upon the doctors for their efforts to enforce them.

Our legislators and the people generally have always regarded the medical practice act as a concession to us. That explains the exemption clauses that have been inserted and the various special laws that have been passed. These exemptions and special laws have made the medical practice act practically ineffective for the purpose it was originally intended to serve. Its original purpose was to guarantee the educational qualifications and scientific proficiency of all those permitted to practice the healing art in this state.

Apparently there are a great many people in the state who do not want such

guarantees and who resent this effort on the part of the state to protect them against incompetent practitioners. There have always been a few people of that type in every community, but such a large number as the recent epidemic of "poll-evil" indicates cannot be ignored.

If the people want these laws repealed what should we do about it or what can we do about it?

The altruism of the medical profession is usually misunderstood or misinterpreted, any of its efforts that suggest paternalism are resented, but its charity is received as if it were activated by an insatiable obligation. So long as this attitude of the people toward the medical profession holds, any militant program is destined to fail. And militancy is quite out of harmony with the art of healing even if a program of that sort promised a favorable outcome.

We as a profession are lacking in political sense, our thoughts and efforts have been directed to the discovery of facts instead of their concealment, and our normal inclinations are toward the promotion of peace and happiness rather than strife. We do not know how to secure the passage of desirable laws or the defeat of undesirable laws, nor how to manipulate the enforcement of laws for our own comfort or profit. Under the circumstances it may be wise for us to devote all our efforts to the prevention and cure of disease and leave the making of laws and the enforcement of laws to the politicians and their henchmen.

There are quite a few of the members of this Society who feel that way about it and there are a great many people who agree with them. It is rather surprising how many people there are who still think that preachers and doctors have no business meddling in politics. Possibly they wish to preserve in purity

those to whom they entrust the care of their bodies as well as those to whom they entrust the care of their souls, and fear they might become contaminated by too intimate associations with politicians.

Considering the importance and unimportance of our extremely few successful ventures into politics there is really no justification for antagonizing these friendly sentiments of the people.

There is another side to this picture, however. While the medical profession has never been credited with a high degree of political sense it has by honest and persistent effort accomplished something by which the people have been greatly benefited.

For nearly twenty years the Kansas Medical Society "memorialized" each successive legislature with pleas for the creation of a board of health and the promulgation of necessary health regulations and finally in 1885 the board was created. With the same sort of persistence it continued for more than thirty years its efforts to establish a standard of qualifications for practitioners of the healing art, until the adoption of our medical practice act in 1901.

Among the members of the Society in those early days were a few statesmen of acknowledged ability and some aggressive politicians with considerable following, but it was not by the influence of these men that the adoption of those laws was brought about. In fact it was not until the people had learned from the experience of other states and had been taught something of the principles of disease prevention that they were willing to submit their destinies to a legally constituted and cautiously empowered health department.

There are some who will remember the persistent but futile efforts of the State Society to secure some satisfactory

medical legislation during the latter part of the nineteenth century and these will recall the conditions which existed during the two years preceding the session of the legislature of 1901. Ignorant and incompetent practitioners of every description then in existence had swarmed into the state, but in addition to these there were men traveling about the country claiming to represent prominent and well known surgeons and physicians in Kansas City, St. Joseph and Topeka. They would ascertain the names and addresses of people with chronic ailments, call on them, make pretended diagnoses, guarantee to cure them, secure a note which they could readily cash at the local bank, and they would be heard from no more. It was the complaints of the victims and friends of the victims of these unprincipled crooks, and the demands made upon their representatives in the legislature that was responsible for the passage of the medical practice act by the legislature in 1901.

Under these circumstances it would be extremely humiliating to the medical profession to have this law repealed, and it would also be more discouraging than were the oft repeated failures. However, there is some reason to think that the people are not dissatisfied with the law itself but with the method provided for its administration. For instance, the people would probably approve of the revocation of a license on account of gross immorality or unprofessional conduct, but resent such action when charges are brought by one group of doctors and the evidence heard and the decision made by another group of doctors. At least that was the burden of the criticisms made during and after the hearing of the Brinkley matter.

It was believed at the time the medical practice act was drafted that a test of qualifications to practice the healing art



could only be made by qualified physicians, and a board composed of physicians was created for that purpose. Out of this has grown the charges of jealousy and unfairness and all the other antagonistic sentiments against the Kansas Medical Society and the regular profession in the state. The fact that this law intended to regulate the practice of medicine was placed entirely in the hands of those to be regulated don't appeal to the average individual as evidence of altruism in those who sponsored it.

If this is a fair interpretation of the sentiment of the people it might be well for us to support the bill which, it has been reported, will be introduced, providing for the abolishing of all the examining boards and the transfer of their duties to the board of health or to a commissioner of health.

As stated above, the purpose of the medical practice act was to protect the people against unqualified practitioners of the healing art, but it has been rendered incompetent for that purpose. Because of the special laws that have been enacted and because of the difficulties in law enforcement, a license to practice the healing art in this state offers no guarantee of the holders qualifications. The people still have the privilege, for which they seem to hanker, of employing crooks, charlatans or ignoramuses if and when they wish.

But for those people who are more concerned and more particular about the quality of service their ailing bodies receive there still remains the only reliable guide to properly trained physicians—the roster of members of the Kansas Medical Society.

For seventy years this society has been the censor of scientific ability and professional integrity of the practition-

ers in this state. With the years it has grown in strength and in influence, and so long as the interests of political parties have first consideration in the adoption and enforcement of laws, membership in this society will give the people a better guarantee of competency than any regulatory legislation that has been or is likely to be enacted.

For this reason and for other reasons which have frequently been discussed in these columns our efforts should be directed toward the perfection of our organization. Membership in this society should be one of the most valuable assets a practitioner in this state can own. It should be worth more to him than membership in any other organization of any kind.

The better class of people do realize the importance attached to that sort of recommendation. They are suspicious of a doctor who is refused admission to his county medical society and this attitude should be encouraged and strengthened by strict adherence to the requirements for admission and more profound respect for the principles of ethics by those who are members.

#### THE NURSE PROBLEM

There is a real problem in connection with the examination and registration of nurses. There has been in previous sessions of the legislature and there will probably be in this one an effort to repeal the nurses registration law. Naturally the members of our Society are largely concerned in the training of nurses and from such information as is available opinions are divided as to what changes, if any, should be made in the present law.

One of the objections to the present law is that it gives too much authority to the board of examiners and that this has resulted in arbitrary requirements



which the small hospital training schools are unable to comply with. It is claimed that these small hospitals render a very important and necessary service to the communities in which they are located, and that it would be impossible to operate these hospitals without a training school. It has been suggested that some change be made in the law which would establish a minimum standard for training schools and which would relieve the board of the responsibility of changing those standards at will.

Another line of complaint has its foundation in the standard of fees prescribed for registered nurses. It is claimed that the people, or at least a great majority of them, cannot afford to pay the fees demanded. One of our correspondents writes that the physicians in his county are depending entirely on practical nurses and are very well satisfied. It is claimed by some that the registration law has enabled the nurses to set up a universal fee bill which imposes an impossible burden upon the people.

The rapid evolution of the highly technical nurses training schools to be found in the larger hospitals has brought about a situation not unlike that which resulted in the elimination of all the small medical schools some years ago. It is just as impossible to give the requisite training course in the small hospital as it was to give the requisite clinical training in the small medical school. But the problem is not so easily solved as was that of the medical schools. The small medical school was not a necessity to the community and rendered no service that could not be dispensed with or derived from some other source. But the small hospitals may not be disposed of so easily, they serve a real purpose for which there is no substitute except in another hospital.

The evolution of the training school

has brought about another condition which further complicates the problem. While the training school is an economic feature in a small hospital it is a considerable burden to the large ones. The added cost of the training school must ultimately be charged to the patrons of the hospital, which suggests that in the final analysis nurses training schools will be either endowed institutions or supported by the state. That, however, does not solve the problem of the small hospital which just at this time is demanding consideration by the medical profession and the legislature. Under the present conditions it would probably be wise to make some concessions to these hospitals even though in so doing some sacrifice of ideals in nurses training results.

The situation is one which requires very thoughtful consideration. None of us would consider advisable any plan that would tend to lower the efficiency of our hospitals by the admission to their staffs of unqualified practitioners, for the same reasons we cannot consider any plan which tends to lower the standing of our training schools upon which the efficiency of the hospitals also depends.

The problem which now presents itself might have been anticipated, for the educational program for nurses as so far developed is utterly impossible with the facilities for instruction now available. The problem is therefore not primarily a legislative one but has become so because of the complications arising from an effort to accomplish the impossible. One who hopes to solve the problem by any legislative procedure is certainly doomed to disappointment. But it can be solved by the co-operative efforts of the hospitals and the nurses association.

This subject has been discussed in these columns at various times in the past few years and it may not be out of

place to repeat some of the suggestions that have been made. But first; let it be granted for the sake of argument, that the contention of the nurses association is correct and that adequate training cannot be given in small hospitals; let it also be admitted that the training school is a financial burden in a large hospital, but efficient nursing service is necessary for the proper conduct of both classes of hospitals.

Let there be established departments of nursing education in the University and the Agricultural College and such other colleges in the state as may care to take on the work. In these departments will be given a nine months intensive course of didactic instruction covering the subjects now taught in the best training schools. Those who successfully complete this didactic course will then be entered for practical instruction in the larger hospitals in the state for one year, and then they will be distributed for service and further clinical instruction in the small hospitals where they will also serve for one year, and after that a diploma may be issued or they may be examined by the board or other authorities for registration or both if desired.

By this plan a uniform and adequate educational program may be carried out, the small hospital will have the services of nurses already well trained and the financial burden will be removed from the large hospitals. With no study hours and no class hours to interfere with the routine duties the larger hospitals should be able to do with one-third the number of nurses now required.

This plan should be feasible and should develop into a very efficient training system, but unfortunately it does not solve another feature of the problem which during the present economic crisis has become greatly magni-

fied. It seems imperative, under present conditions at least, that the cost of hospital care should be reduced. The plan proposed should permit some reduction in hospital fees, but that does not go quite far enough. Much of the heavy cost of hospital care is occasioned by the employment of special nurses. In a large proportion of the cases requiring one or more special nurses it is not special skill that is required but constant attention, and in such instances the hospital should be able to supply the required nurses from its own staff at a very considerable reduction in the fees now charged.

It seems that the problem can be solved by some plan such as suggested in so far as the hospitals and the nurses association are concerned, but there still remains the demands of the people and many of our profession for a less expensive nursing service outside of the hospitals.

As in the hospitals a majority of the patients need constant service rather than skilled service and resent the necessity of paying for what they do not require. At any rate, that is the way the case is presented, and since it is presented with considerable backing it must be given fair consideration. If a supply of less efficient and less expensive nurses is required to meet this demand how shall they be supplied?

Under the present training school system it is within the suspected sequence of events that the small hospitals will be required to send their pupils to large hospitals for supplemental training or that their graduates will be put in a class by themselves as of inferior quality. This would destroy, in the eyes of the people at least, the reputed efficiency of these hospitals and must not be permitted under any circumstances.

Under the plan suggested above a sup-



ply of incompletely trained nurses can be provided by permitting the withdrawal at the end of the first hospital year of any pupils who wish to become practical nurses and by dismissing the less promising students with the same privilege.

#### AN IMPORTANT DECISION

An opinion was recently handed down by the Kansas Supreme Court which should be of considerable interest to the doctors in this state, especially those who care for corporation employees who are under the workmen's compensation laws.

The case referred to was brought by Dr. E. B. Ross of Wichita against the Austin Drilling Company and the following is quoted from the syllabus of the Court:

1. Physicians and surgeons do not operate under the workmen's compensation act, and in making reasonable charges for their services they are not bound by the provisions of that act which limit the liability of an employer to a maximum of \$200 which he may be required to pay as a part of compensation for medical, surgical and hospital treatment of his injured employee.

2. The general rule that where one stands in no relation to a patient which imports a legal obligation to provide for him calls a physician to treat him, the mere request does not import an obligation to pay for the services, is not applicable to an employer under the workmen's compensation act who calls and directs a physician to treat his injured employee when such employer is under obligation to render treatment to a stated amount, and treatment of a value in excess of that amount may inure to the financial advantage of the employer.

3. On the record before us it is held that the evidence is sufficient to go to the jury on the question of whether there was an express contract to pay for reasonable services, or such contract was implied from what was said in view of all the surrounding circumstances.

#### CHIPS

Compere reports his observations in the treatment of rickets, *American Journal Diseases of Children*, November, and suggests a preference for a combination of phosphorus and cod-liver oil in the treatment of this condition. In all of the cases there was prompt healing with marked calcification and increased density of all the bones studied by means of the Roentgen rays.

Resuscitation of the stopped heart by intracardiac therapy is not only successfully practiced but is indicated in every case of death that occurs as the result of the asystolic heart is the opinion of Hyman expressed in a discussion of this subject in the October number of the *Archives of Internal Medicine*. He states that the success of the intracardiac injection procedure is apparently due more to the effect of the puncture wound made in the wall of the heart than to the chemical substance injected. The myocardium of the normal asystolic heart rapidly becomes irritable with the onset of anoxemia and in this condition various kinds of mechanical stimulation may cause contraction. The puncture is a focus of increased irritability from which a stimulus for myocardial contraction may be developed. The first contractions are extra-systoles but the extra systolic rhythm may be replaced by a normal sinus rhythm, or if the anoxemia has been much prolonged the extra systolic rhythm may persist and be followed by ventricular fibrillation and death. Because of the observation that the auricles are more responsive to mechanical stimulation than the ventricles and because auricular extra-systoles are followed by normal ventricular contractions, the author recommends intra-auricular puncture instead of ventricular injections. The cases most favorable for resuscitation are those in which there is no general or cardiovascular disease. It is particularly recommended in deaths occurring on the operating table, those occurring from hemorrhage, shock, anesthesia. In status lymphaticus it may be used in connection with other measures.



Graves' disease is hoary with age, its cardinal symptoms have long been recognized and, at least in the majority of cases, its diagnosis is seldom questioned. In spite of the fact, however, that it is so frequently associated with hyperthyroidism and that thyroidectomy usually results in marked alleviation or entire relief of the symptoms that characterize the disease, the relation of the thyroid gland to Graves' disease is still a subject for much speculation. In an article appearing in the *Archives of Internal Medicine* for October, Moschowitz says: "One must conclude, therefore, that despite the fact that many of the signs of Graves' disease are apparently the effects of hyperthyroidism, the gland itself is not the primary cause, and the changes that occur in the gland are the resultant factors." The facts upon which he basis this hypothesis are apparently no more numerous nor more conclusive than those upon which other similar opinions have been formed. The particular observation stressed in this article is that there is always a constitutional background for the development of Graves' disease. That this background may be determined by careful search of the personal and family history of the individual. He says: "The natural history of the disease extends over a long period. The earliest phase is that heretofore known as formes frustes, "base-dowoid," automatic imbalance, etc.; the final stage is that conventionally termed Graves' disease, with the characteristic quadrad of signs—tremor, tachycardia, enlarged thyroid gland and exophthalmos." The transition from the early phase to the fully developed Graves' disease "is usually traceable to a psychic insult which is in the nature of a surprise." He thinks there is no doubt that the results of subtotal thyroidectomy are speedier and more lasting than those obtained by strictly medical means. However, he points out that all that is accomplished by this procedure is to depress rapidly the basal metabolism. There are recurrences because the constitutional factor remains and the possibility of similar reaction to the proper

stimulus has not been removed by the surgeon.

That there is a specific remedy for pneumococcic pneumonias in the normal secretions of the body and that the specific element in such secretions may be used intravenously in the successful treatment of pneumonia may be reasonably anticipated from the report of Ziegler, in the October number of the *Archives of Internal Medicine*, on the effect of bile salts upon pneumococci. According to his observation lysis of pneumococci by bile salts takes place in serum although serum retards the action. Bile salts also cause a lysis of the blood cells, but they are five times more lytic for pneumococci than for blood cells. According to the observations reported, bile salts tend to terminate the course of pneumococcic pneumonias, they produce a mild anemia, they cause an increased output of bile and in certain concentrations damage the veins. The author suggests the improbability of success from endotherapy with bile salts since they would be absorbed in the intestine, taken to the liver through the portal system and excreted by the liver into the bile. The difficulty with the intravenous method lies in the damage to the veins which results from the injection of even a 1 per cent solution. An obliteration of the veins injected follows and while this causes no marked interference with the circulation it is a serious objection to that method. Further investigations are being made and no doubt some means will be found by which this irritation to the veins may be avoided. It is suggested that icterus in pneumococcus pneumonia is considered to be indicative of a protective mechanism and not of a toxic phenomenon. Attention is called to the fact that this is the first time bile salts have been used in the treatment of pneumonia although they have been used previously in the treatment of other pneumococcic infections.

It has always seemed a rational conclusion that the pain in peptic ulcer was caused by increased acidity. Recently there have been reports indicating that the injection of foreign proteins resulted

in relief of the pain in these cases and that this freedom from pain extended over considerable periods in some of the cases. A report of some recent studies by Meyer and Kartoon appeared in the November number of the *Archives of Internal Medicine*. Their observations were on eleven patients with peptic ulcer that had been definitely diagnosed. Frequently repeated tests for acidity were made and it was found that gastric acidity was decreased in five, unchanged in four and increased in one. In four in which acidity was reduced there was relief from pain, in one in which the acidity was reduced there was no relief from pain. In three cases there was no change in gastric acidity but the pain was relieved. In one case the acidity was increased but the pain was relieved for from twenty-four to forty-eight hours. These results seem inconsistent with the theory of pain due to acidity. They have evolved the hypothesis that pain from ulcer is associated with variations and disturbances in the blood supply in and about the ulcer. Pain is diminished by the ingestion of food which increases the general vascular supply of the stomach, particularly about the area of the ulcer, this increased vascular supply diminishes the tonus and spasm thus relieving the pain. The return of pain in from one-half to one hour after food is due to the increased vigor of peristaltic activity which depletes the vascular bed of the rugae of the stomach resulting in local asphyxia, edema, spasm and pain. The injection of foreign protein results in a lowering of vagus tonus and diminution of gastric tonus and gastric contractions and thus causes relief of pain.

The relation between diabetes and obesity suggests possible changes in the pancreas due to deposits of fat. The finding of a diminution of parenchymatous tissue in the fatty pancreas by Balo and the finding by Truehart of areas of necroses in the interstitial fat of a large number of fatty pancreases, has been supplemented by the findings of Hup who examined the carcasses of a large number of fat swine. Necroses were found in a large per cent of these al-

though none were found in the lean ones. He suggests a program of pathologic events beginning with the deposit of fat in the interlobular tissue, separation of the pancreatic lobules by adipose tissue, followed by pressure on the lobular ducts, stasis of secretion, and then ascending infection, focal parenchymatous necrosis, liberation of lipase and necrosis of fat. That these changes would result in diabetes seems a rational conclusion but the fact cannot be demonstrated in these animals because their lives are promptly terminated after they have reached that stage of obesity.

The importance of an accurate diagnosis in cases suspected of having tuberculosis is brought out very forcibly in a lecture recently delivered by Burrell before the Royal College of Physicians of London and published in the *Lancet*, November 22. He said: "Tuberculin may be of little value but it has at least brought out the fact that a large proportion of human beings is infected with tuberculosis. Yet only a few develop clinical tuberculosis. Since so many are infected and so few affected it follows that the majority of people keep well without any treatment at all. To submit anyone to a long course of unnecessary treatment is not only useless but may do untold harm. Many a healthy person has been frightened into invalidism by the threat of tuberculosis. Instead of following a normal career, the patient gives up business and devotes his life to health. He develops fads about food and clothing, cannot live in this or that climate, must winter out of England, is in a constant state of anxiety about his health and is never really happy. Bad as this is for an adult, it may be much worse for a child if taken away from school and companions of a like age at the most impressionable time of life. On the other hand, an active tuberculosis is very amenable to treatment in the early stages, but if neglected quickly gets out of control. It is, therefore, of the utmost importance to distinguish between the tuberculous and those who are out of sorts through some other cause."



In discussing the use of special tests he states that none of them is of any value except in a negative sense. He places a good deal of confidence in examination by *x*-rays if the interpretations are correctly made.

—R—

### American Board of Obstetrics and Gynecology

The American Board of Obstetrics and Gynecology, composed of nine members and examiners, elected by The American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, The American Gynecological Society, and the Section on Obstetrics, Gynecology, and Abdominal Surgery of The American Medical Association, was formally organized in Niagara Falls, September 16, 1930. The function of the Board is to grant certificates indicating proficiency and specialization in Obstetrics or Gynecology, or both, to those who comply with its requirements.

This board puts into action a determined effort on the part of these three national organizations to improve the standards of practice of obstetrics and gynecology. It expects to accomplish this by various activities, such as the investigation and encouragement of graduate extension study facilities and active clinical assistantships for men desiring to specialize in these branches, and it will endeavor by regular examinations to determine the competence of specialists in obstetrics and gynecology who apply for the certificate. Certain outstanding specialists will be granted certificates on the basis of their attainments alone, but only by a vote of the entire board after recommendation by the Committee on Requirements. A second group is asked to undergo a practical clinical examination, whereas a third and younger group has both written and clinical examination and must submit records of a group of cases in order to qualify.

It is expected that both the medical and the lay public, including hospital directors, will soon come to utilize the certificate from this board as a means of discriminating between those who are well grounded as specialists in obstetrics and gynecology and those who are not.

The board does not intend in any way to interfere with or limit the professional activities of any duly licensed physician, but it does aim toward standardized qualifications for specialists in obstetrics and gynecology.

Any well qualified obstetrician and gynecologist should have no difficulty in obtaining a certificate and the board is desirous of receiving applications from those to whom this applies.

The first examination for candidates in group 3 will be held by G. D. Royston in St. Louis and W. R. Cooke in Galveston for the district comprised by Missouri, Kansas, Nebraska, Arkansas, Texas, Arizona, Oklahoma and New Mexico.

The examination will consist of ten questions on obstetrics and gynecology, and a minimum rating of 75 per cent will be required. Each candidate for Group 3 also will be required to submit type-written reports on a total of fifty (50) obstetrical and gynecological operations which he has performed, and these case records are to be presented with his examination paper to his local examiner on March 14.

The practical, or oral, clinical and laboratory examination will be held in Philadelphia, Pa., on Saturday, June 6, 1931, commencing at 9 a. m., and will be given to all applicants in Group 2 and Group 3. The candidates will be expected to identify and discuss three or four common obstetrical and gynecological pathologic specimens and the histologic sections taken from them. The clinical part of the examination will be conducted in a hospital where an individual case will be discussed in detail with each candidate. An endeavor will be made to adapt the details of the oral examination to each candidate's experience and practice, and will be particularly directed to ascertain his familiarity with recent obstetrical and gynecological literature, the breadth of his clinical experience, and his general qualifications as a specialist in Obstetrics and Gynecology.

Detailed information and application blanks may be secured from Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, Pa.

## SOCIETIES

## BARTON COUNTY MEDICAL SOCIETY

The Barton County Medical Society met in annual session in the auditorium of St. Rose Hospital, December 10, 1930, at 8:00 p. m.

The meeting was called to order by the president, Dr. T. J. Brown. Minutes of last meeting were read and approved. This being the annual meeting for election of officers for next year it was voted that the regular order be set aside and the present officers be re-elected by acclamation. Carried.

The Secretary read a communication from the State Society that Dr. A. C. Johnson of Pawnee Rock, Kansas, had moved from Labette County and was automatically a member.

It was moved that Dr. G. A. Koerber practicing at Hoisington, Kansas, be elected to membership. Carried. This brought out the fact that this action made Barton County 100 per cent in membership, there being eighteen active practitioners in the county and eighteen in the county society.

It was decided that the Secretary-Treasurer should pay all membership dues in the State Society and A.M.A. in consequence of the County Society handling the county poor work.

There being no further business and no program having been prepared the meeting adjourned after voting to hold an early spring meeting and banquet.

L. R. MCGILL, Secretary.

## BOURBON COUNTY SOCIETY

The Bourbon County Medical Society met in regular session at the Goodlander Hotel for the annual banquet, with the wives as guests of the doctors, at 7 p.m., Dec. 15, 1930, with Dr. Gooch in charge.

Minutes of the last meeting read and approved. Since this was the time for the election of officers for the coming year the results were as follows: R. Y. Strohm, president; J. D. Hunter, vice president; R. L. Gench, secretary-treasurer; R. O. Crume, censor, and W. S. Gooch, delegate.

Dr. Smith of Crawford County asked the society what it thought of having

joint meetings, with a view of having the fellows together several times a year.

There has been a report in the paper that our water supply is impure, which led to a discussion of the subject. No definite action taken, since we are to meet with Dr. Earle Brown shortly.

Following the banquet Dr. George Lee of Kansas City, Mo., as our guest speaker, spoke on "Disorders of the Heart." He gave a very interesting, comprehensive and practical paper. Questions were asked by Drs. Gench, Kennedy, Marshbanks, Newman and Smith.

Dr. J. C. Montgomery, who is connected with the health services of the state, also gave a brief talk on health matters.

Meeting adjourned.

R. Y. STROHM, Secretary.

## CLAY COUNTY MEDICAL SOCIETY

The December meeting of the Clay County Medical Society was held at the Clay Center Country Club on the evening of the 11th. Thirteen members and thirty-seven visitors were present at a seven o'clock dinner. The visitors included a number of the doctors in the district outside of the county and their wives and the wives of the society members. Colonel Ruffner, Chief of Medical Staff at Fort Riley, and six of his medical officers were present together with their wives.

The annual reports of the secretary and the treasurer were read and on motion were accepted and placed on file. The election of officers for 1931 was the next order of business. Dr. C. C. Stillman of Morganville was elected president; Dr. W. R. Morton of Green was elected vice president; Dr. F. R. Croson of Clay Center was elected secretary-treasurer; Dr. G. W. Bale of Clay Center was elected to the board of censors, and Dr. E. C. Morgan of Clay Center was elected as the official representative to the state meeting.

Following the business session, Dr. Harold P. Kuhn and Dr. Ferdinand Helwig, both of Kansas City, Mo., gave very interesting and instructive informal talks on coronary disease. A number of case histories were reviewed and the



pathological specimens were demonstrated by Dr. Helwig.

Dr. J. D. Colt, Sr., of Manhattan announced the state meeting which was to be held in their city in May, 1931.

It was moved and carried that the January 1931 meeting be held at the Country Club in conjunction with the January meeting of the Clay County Dental Society.

On motion the meeting adjourned at 10:47 p. m.

F. R. CROSON, Secretary.

#### SUMNER COUNTY SOCIETY

At the meeting of the Sumner County Medical Society, on December 18, 1930, at the Community Park House, in Wellington, the following program was given:

Paper, "The Causes, Effects and Treatment of Acute and Chronic Oxygen Want," by Dr. C. F. Nelson, of the Biochemistry Department of the University, Lawrence, Kansas.

Paper, "Conservatism in the Treatment of Nasal Accessory Sinus Infections," Dr. I. H. Dillon, Wellington, Kansas.

Following the program the following officers were elected for 1931: President, Dr. R. C. McIlheny, Conway Springs; vice president, Dr. J. A. Phillipsen, Wellington; secretary-treasurer, Dr. I. H. Dillon, Wellington; censor, Dr. F. G. Emerson, Wellington; delegate, Dr. W. A. Heap, Mulvane; alternate, Dr. I. H. Dillon, Wellington.

Drs. J. M. McGrew, Wellington; J. P. Turner, Mulvane, and G. M. Wooden, Argonia, were elected to membership.

I. H. DILLON, Secretary.

#### DEATHS

Norton J. Taylor, Berryton, aged 88, died December 19, 1930. He graduated from the University of Pennsylvania Medical School in 1865. He located at Berryton in 1869 and has practiced there continually until a few weeks before his death. He was a member of the Society.

Charles Rewerts, Garden City, aged 45, died suddenly on December 17, 1930. He graduated from the University Medical College, Kansas City, Missouri, in

1911 and had practiced in Garden City for twenty years. He was a member of the Society.

Fred a Cogswell, Leona, aged 67, died in October (1930) in Wetmore. He graduated from the University of Iowa College of Medicine in 1889.

#### BOOKS

Physical Diagnosis by Warren P. Elmer, M.D., Associate Professor of Clinical Medicine, Washington University and W. D. Rose, M.D., Late Associate Professor of Medicine in the University of Arkansas. Published by C. V. Mosby Co., St. Louis. Price \$10.00.

While this is a new work on physical diagnosis it is not another one. It is in fact a reconstruction of Dr. Rose's work which justifies the use of his name in connection with the authorship. Much of the original material has been retained, some has been rewritten and considerable new matter has been added.

Compend of Bacteriology by Robert L. Pitfield, M.D., and Howard W. Schaffer, M.D. Fifth edition. Published by P. Blakiston's Son & Company, Philadelphia. Price \$2.00.

These little compends seem to have a place in medicine. No doubt they help the student who is preparing for an examination and perhaps they help the busy practitioner to understand some of the etiological discussions he hears or reads. This one now in its fifth edition seems to have found a demand and its careful preparation no doubt justifies a kind reception.

Human Anatomy, Piersol's ninth edition, revised under the supervision of G. Carl Huber, M.D., Professor of Anatomy, director of anatomic laboratories and dean of the graduate school, University of Michigan. Published by J. B. Lippincott Company, Philadelphia. Price \$10.00.

One would hardly expect very much change in a revision of an elaborate work on anatomy. Nevertheless considerable has been added, especially concerning the histogenesis of the blood elements, the development of the lymphatics and the primary veins, the peripheral nervous system and fibre paths of the central nervous system. There has also been some changes in the nomenclature. Apparently it is still Piersol's Anatomy, whose anatomical features can never grow old.

Treatment of Epilepsy by Fritz B. Talbot, M.D., Clinical Professor of Pediatrics, Harvard University Medical School. Published by The MacMillan Company, New York. Price \$4.00.

In harmony with the newer conception of the conditions to which the term epilepsy has long been applied the author describes the more recent methods of treatment. Particular attention has been given to the theory and therapeutic use of the ketogenic diet. He seems to think the long continued success with this treatment justifies new methods of treatment. The technique of the dehydration method is also given. This book presents a very comprehensive discussion of the subject which will be found of service to practitioners.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 14, No. 3. (Mayo Clinic Number, November 1930) Octavo of 261 pages with 50 illustrations. Per Clinic year, July 1930 to May 1931. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1930.

The clinic of Eusterman and others deals mostly with ulcer and carcinoma of stomach, but a case of carcinoma of the prostate with extensive metastasis is also described. Rivers also discusses peptic ulcer. Adams describes a case of diabetes with thrombo-angiitis obliterans. Vinson reports some cases of foreign bodies in bronchi. Bergen and Giffin report cases of chronic ulcerative colitis with splenomegaly. O'Leary discusses the use of typhoid vaccine in the treatment of neurosyphilis. Moench and Drips report cases with growths of various kinds in the uterus. Barborka has a very interesting paper on obesity. Smith and Keith report on perinephritic abscess. Maytum discusses the differential diagnosis of asthma. Stuhler and Nickel discuss purpura of infectious origin. These subjects selected at random will give some idea of the contents of this number of the clinics.

Medical Biometry and Statistics. By Raymond Pearl, Ph.D., Sc.D., LL.D., Professor of Biology in the School of Hygiene and Public Health, and in the Medical School, Johns Hopkins University, Baltimore, Md. 459 pages. Second edition, revised and enlarged. Philadelphia & London: W. B. Saunders Company, 1930. Cloth, \$5.50.

Instruction in the preparation of statistics is important, but in recent years

it is quite as important for the reader to understand the mathematical principles involved in their preparation. In fact there is now in the current literature a lot of ultra scientific matter that is meaningless to most of us. One wonders if it would not be a more profitable undertaking to simplify this matter rather than try to teach us how to understand it.

Operative Gynecology by Harry Sturgeon Crossen, M.D., Professor of Clinical Gynecology, Washington University and Robert James Crossen, M.D., Instructor in Clinical Gynecology and Obstetrics, Washington University. Fourth edition. Published by C. V. Mosby Company, St. Louis. Price \$15.00.

This is a complete revision of Crossen's book. Four new chapters have been added; genital fistulae, diseases of the urinary tract in relation to pelvic surgery, diseases of the intestinal tract in relation to pelvic surgery, and anesthesia in gynecologic surgery. There are also four hundred new illustrations. In the description of the various operative procedures much attention is given to detail.

A Primer for Diabetic Patients. By Russell M. Wilder, M.D., Professor and Chairman of the Department of Medicine, University of Chicago Clinics; Formerly head of the Section of Nutrition, Division of Medicine, Mayo Clinic. Fourth edition, revised. 138 pages. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, \$1.50.

The fourth edition of this little book has not been changed very much. The author seems to think that the more liberal carbohydrate diets are not quite satisfactory. Many diets and many recipes are given.

Chronic Arthritis and Rheumatoid Affections by Bernard Langdon Wyatt, M.D., with the collaboration of Louis I. Dublin, M.D. Published by William Wood & Company, New York. Price \$2.50.

One should not expect to read of a specific remedy for chronic arthritis and the author does not offer one. He does describe in considerable detail various methods of treatment which have more or less value in the prevention and relief of various forms of arthritis. The discussion of the causes of arthritis is instructive although but a review of the literature now extant.



### The Prophylaxis of Cocaine and Allied Intoxicants

A study to determine the efficiency of barbital compounds in the detoxication of local anesthetics has been made. The minimal tolerated and minimal lethal doses of cocaine, procaine and butyn for rabbits were determined without protection and after the administration of various depressants. The depressants found effective and in the order of their efficiency were urethane (ethyl carbamate), chloral hydrate, paraldehyde, barbital, phenobarbital, and isoamylethyl-barbituric acid, the last named being the most effective. The investigators find that there are two types of intoxication into which clinical cases may be divided. One has a prolonged course and death results from primary respiratory failure; the other has a short course and death results from primary cardiac failure. The first type is reproduced experimentally by subcutaneous injection of cocaine, the second type by intravenous injection. Against this second type of intoxication the depressants are valueless. (J.A.M.A., Dec. 13, '30.)

—————R—————

### Pregnancy and Tuberculosis

Harvey R. Matthews, Brooklyn, and Louise Stevens Bryant, New York (J.A.M.A., Dec. 6, 1930), sent a questionnaire to 1,000 married women graduates of Trudeau Sanatorium, inquiring as to their experience with child-bearing. Nearly half responded, 484 in enough detail to make possible certain comparisons and observations, which are presented. One-third of the 484, or twice the highest figure set for involuntarily sterile marriages, never became pregnant. (Estimates for involuntarily sterile marriages range from one in six to one in ten.) The other two-thirds proceeded with caution. They became pregnant only about half as frequently as the average, if the women attending birth control clinics can be taken as the average. Finally, they brought to living birth a far smaller proportion of the children conceived than appears usual. Just over half of the group, 287, bore even one living child, and these bore a scant two apiece. Those who bore more than one or two living

children had done so before contracting tuberculosis. Losses before and immediately after birth were disproportionately high, averaging thirty-five to every hundred living births. But losses after birth were extremely infrequent. Most of the babies were breast fed and kept on a careful regimen, and nearly all were given medical examination, so that only a third of the expected number died in infancy, and few thereafter. Of the 579 children born alive, 556 were still alive when their mothers reported, fifteen years later. The majority of these women did not claim any relationship between tuberculosis and pregnancy. Only one-third of those pregnant at any time found that the disease began or recurred with a pregnancy or after a delivery or an abortion. But, of all women pregnant before "cure," 44 per cent had found their tuberculosis adversely affected. The more advanced the tuberculosis, the more deleterious the effect of pregnancy. The women who took sufficient time before getting pregnant after being "cured" (three years or more), and who obeyed all rules and regulations after leaving Trudeau, fared better than those who did not. Postpartum hemorrhage occurred in a very large proportion, amounting to 44 out of 317 cases, or 13 per cent. Menstrual disorders were very common among this group of tuberculous women, being reported by 47 per cent. Out of the 579 children born, 556 are alive, and 501 are healthy and well. Fifty-five are below par, and only 9 of these have had tuberculosis in any form, or have been suspected.

—————R—————

### Reaction of Content of Gastro-Intestinal Tract

Frank C. Mann and Jesse L. Bollman, Rochester, Minn. (J.A.M.A., Dec. 6, 1930), have developed a method for repeatedly securing, under normal physiologic conditions, specimens of the gastro-intestinal content at various levels of the tract. Estimation of the acidity in the fasting animal showed that the gastric juices are usually strongly acid, pH 1.5 to 2.0, but may be at times almost neutral. The content of the duodenum, jejunum, ileum and colon is usually

found to be alkaline,  $pH$  7.0 to 8.0, with the exception that the content of the duodenum may be found to be acid when highly acid values are found in the content of the stomach. Following a meal, the acidity of the content of the gastro-intestinal tract depends largely on the development of acid in the stomach. Short periods of high acidity of content are common in the duodenum and less common in the small intestine, the greater the distance from the pylorus. The usual reaction in the small intestine, after a meal, is close to neutrality,  $pH$  6.5 to 7.5. The content of the colon is usually slightly alkaline but may be slightly acid, especially following a meal rich in carbohydrate. Dietary measures may greatly alter the acidity of the content of the gastro-intestinal tract.

—————R—————

#### **Incidence of Bromide Intoxication Among Psychotic Patients**

Since March, 1928, a determination of the bromide content of the blood serum has been a part of the routine in the examination of all patients admitted to the Colorado Psychopathic Hospital. Carl P. Wagner and D. Elizabeth Bunbury, Denver (J.A.M.A., Dec. 6, 1930), have made a study of the first thousand consecutive cases so examined. Of the thousand cases examined, 7.7 per cent showed bromide in the blood serum in a concentration of 75 mg. per hundred cubic centimeters and over. Of these, thirty-three, or 42.85 per cent, had received the bromide on a physician's prescription; fourteen, or 18 per cent, had taken "patent" medicines; and in thirty, or 38.95 per cent, the source of the drug remained undetermined, but undoubtedly these patients had also taken "patent" medicines, although most of them denied that they had taken medicine of any kind, even when they were confronted with the fact that their illness was due to drug intoxication. In seventeen, or 22.08 per cent, admission to the hospital was sought entirely on account of drug intoxication. Most of these patients recovered before or shortly after leaving the hospital. However, two cases terminated fatally, and in these death was due to the indiscriminate use of bromides only. Both of

these patients showed a bromide concentration of over 300 mg. per hundred cubic centimeters of blood. On admission, both had been under the care of a physician and had been taking bromide on prescription. Five other cases terminated fatally. One of these, a patient with dementia paralytica, showed only 75 mg. per hundred cubic centimeters, and the authors do not feel that the bromide contributed toward his death. The four remaining patients, one with cerebrospinal syphilis, one with senile dementia, and two with cerebral arteriosclerosis, died of cardiac decompensation. In these the bromide contributed toward their death in that the excitement due to delirium aggravated the decompensation. The authors assert that undesirable mental symptoms can be reduced to a minimum if the physician will be on the outlook for exacerbation of mental symptoms during bromide administration or if he is willing to make determinations of bromide concentration in the blood. Special care should be exercised in the administration of bromide in cases of organic nervous disorders, particularly those in which the excretory or circulatory functions are impaired.

—————R—————

#### **Acute Intestinal Obstruction**

The most important single factor in the clinical consideration of acute intestinal obstruction, says Irvin Abell, Louisville, Ky. (J.A.M.A., Dec. 20, 1930), is the element of time; a second one of great moment is offered by the site and character of the obstruction, whether high or low, the former pursuing a more rapidly fatal course than the latter. The precise significance of these two factors becomes apparent with a full realization of the sequence of events common to all types of acute intestinal obstruction; namely, mechanical obstruction of the intestine with stoppage of the fecal current, damage to the bowel wall with ultimate gangrene and peritonitis, and an associated production of toxins often of the most virulent type. The high mortality that has obtained and still obtains in the treatment of intestinal obstruction is a serious indictment of both diagnostic ability and surgical initiative. While



acute intestinal obstruction carries an inevitable mortality, the greater portion of the mortality may justly be attributed to delay in recognition and to tardiness in the institution of appropriate surgical treatment. The solution of the problem in the early hours following the advent of obstruction, when but simple obstructions are present, may require nothing further; the mortality is low and the results are brilliant if the obstruction is relieved before the wall of the bowel is compromised by pressure or strangulation, volvulus or thrombosis. With the incidence of the complications dependent on strangulation and toxemia, which invariably follow the continued presence of the obstruction, the relief of the obstruction becomes but one of the indications to be met and the risk of any operative procedure is enormously enhanced. Unfortunately, an attitude of ultraconservatism in diagnosis, awaiting the onset of symptoms that prove the presence of obstruction but also indicate the approach of dissolution, has been, if not the accepted rule, then one quite commonly followed. It is an unpardonable mistake to spend invaluable time in making differential diagnosis when symptoms of an abdominal emergency are evident. The presence of abdominal pain, vomiting and constipation with an absence of fever and leukocytosis should put the burden of proof on the medical attendant to show that no obstruction exists. The history, particularly if previous abdominal ailments are indicated, the physical examination, the presence of active peristalsis, visible or audible, with the flat roentgenogram interpreted by a competent radiologist, in addition to the three cardinal symptoms mentioned, should permit of a working diagnosis before the accession of fever, leukocytosis, distention and paresis indicates changes brought about by strangulation, and chemical examination of the blood shows profound alterations. Morphine and purgatives but compound the felony of delay. The former, with its relief from pain afford the patient a false sense of security, denies him the relative safety which early operation offers and lets him drift into the dangers of delay,

while the latter merely increases the damage which an already active peristalsis inflicts. The principles underlying the surgical treatment of acute intestinal obstruction are discussed under three headings: the preparation of the patient, the operation, and the postoperative treatment.

—R—

### **Growth of Bone and Development of Rickets**

The data collected thus far by Edward Clay Mitchell and Martha V. Nelson, Memphis, Tenn. (J.A.M.A., Dec. 20, 1930), indicate that the bone growth of well fed, rapidly growing, active infants is not necessarily symmetrical during the first year of life and fails to conform to the standard conception of nonricketic bone development. Whether this is due to the absence of a sufficient quantity of vitamin D or to the present conception of the character of ricketic bone changes is a subject for further investigation.

—R—

### **Yeast**

Yeast has so uncertain a laxative effect that it is hardly justifiable to class it among the cathartics. It might more appropriately find a place among the laxative diet factors alongside bran, honey and prunes. Its content of vitamin B makes it of specific value in skin eruptions due to vitamin B deficiency, such as those occurring in pellagra. That it is of much value in other skin troubles, such as acne or furunculosis, is doubtful. The history of yeast suggests that it has a therapeutic value, but that this value is slight indeed. (J.A.M.A., June 14, '30.)

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Wifey—"The man said that this vacuum bottle will keep anything hot or cold for 72 hours."

Hubby—"Don't want it. If I have anything worth drinking I don't want to keep it for 72 hours."

✦ ✦ ✦

Rev. George Washington Jackson had lost a fine, fat 'possum. Later, at a revival, one of the grief-stricken mourners would not be comforted. "Cheer up, brothah," exhorted Rev. Jackson.

✦ ✦ ✦

"No matter what yo' sin, it will be fo'given." "But not diss'un," sobbed the mourner. "Ah sho' am a pow'ful sinnah."

"Yo' stole some white man's chickens?"

"Wussen 'at!"

"Oh, Lawd, help dis po' lamb. Has yo' used a rassuh?"

"Wussen 'at, It's wussen murdah, Brothah Jackson!"

"Den Ah knows," shouted the preacher, coming down from the pulpit, peeling his coat. "De good Lawd kin fo'give yo' effen he feels dat a way, but Ah's gwine to climb yo' frame. Yo's de skunk what stole mah 'possum."

✦ ✦ ✦

Little Lotty: Mother, do all fairy tales begin, "Once Upon a Time?"

Mother: No, dear; some begin, "I'll be working late at the office."—Answers.

Lady (to bothersome tramp-: "Here is a home-made cake. Now I hope I won't see you any more."

Tramp: "Well, lady you know your own cooking better than I do."—Mug.

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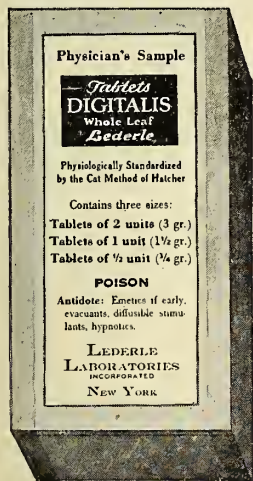
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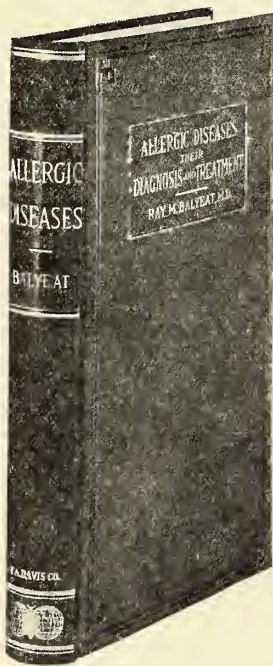
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# THE JOURNAL

of the

## Kansas Medical Society

VOL. XXXII

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No. 2

### **A Review of the Radiation Treatment of Non-Malignant Lesions of the Female Pelvis**

LEWIS G. ALLEN, M.D., Kansas City

Read before the annual meeting of the Kansas Medical Society at Topeka, Kan., May 7, 8 and 9, 1930.

Benign lesions of the female pelvis for which radiation therapy may be employed are chiefly those associated with uterine bleeding. The treatment of benign bleeding from the uterus by radiation therapy constitutes one of the most valuable additions, in the therapeutic management of those lesions. If we except from our consideration benign bleeding not dependent on pregnancy, the remaining types divide themselves into the various irregularities in the occurrence and character of menstruation.

The pathology of the uterine bleeding of the adolescent is much discussed. Most such cases will recover if kept quiet and treated by the internist with the various endocrine products. There are, however, instances when such effort is not successful in the control of this menstrual irregularity. In such cases, no matter whether we consider the cause to be ovarian, myometrial or endometrial, it has been proven repeatedly that the application of relatively small doses of radium within the uterus or in selected cases roentgen radiation from without, the condition is promptly corrected. Occasional re-radiation is required after a period of six months or more.

Like epimenorrhea or polymenorrhea, too frequent occurrence of the menses is usually looked upon as an excess of ovarian action. In such cases the ovaries become hyperplastic or polycystic; after such a condition has existed for some time the uterine mucosa will become hypertrophied. Again most such cases may be expected to respond to medical treatment, or to indicated surgical effort. At the same time an application of a sufficient amount of radiation, either intra-

uterine or to the ovarian areas by roentgen therapy from without, will as would be expected control the irregularity.

Severe menstrual bleeding namely, menorrhagia, is conceived as comparable to the inertia type postpartum hemorrhage or to uterine insufficiency. At the same time another type of severe menstrual bleeding sometimes referred to as menostaxis occurs in a patient who gives a long history of menstrual irregularity and is conceived as being the result of a dysfunction of the corpus luteum. In such cases Norsworthy calls attention to the fact that there is absence of clots in the vagina, although particles of endometrium are often cast off. In this pathology the action of both the roentgen rays and the gamma light radium would be expected and does result in a cessation of the abnormal bleeding.

The pernicious bleeding during gestation possesses an even more indefinite conception of its pathology. Schmitz first reported and since various other workers have confirmed that radiation to the spleen and thyroid in such cases results in a cessation of this pernicious bleeding. It is further pointed out by Norsworthy that intra-uterine irradiation, in extreme conditions, is permissible.

The menorrhagia of the menopause is usually conceived as consisting of an uterine sub-involution, uterine hypertrophy or chronic metritis, associated by an uterine fibrosis as the sequel to a previous metritis. At the same time dysfunction of the ovaries is considered by some to have a part in the explanation of this irregularity. Again, it has been shown that either intra-uterine or extra-uterine radiation will effect a cessation of the bleeding. Uterine bleeding associated with the presence of neoplasms at once suggests, because of their frequency, the bleeding as the result of fibromyomata. In any discussion of be-



nign lesions of the femal pelvis it would be expected that the consideration of fibroids would head the list. The medical profession have been slow to grasp the advantage of radiation treatment in selected cases of fibromyomata uteri and even more reluctant to employ or refer patient for irradiation. It is the opinion of the writer that this reluctance is best explained by an excerpt from "The Roentgen Treatment of Morbus Basedowii" by Holzkecht, the patriarch in the field of radiation endeavor. He says, "the medical world was too anxious to accept contra indications against x-ray treatment. This can be best understood if one considers what a revolution would be created in the medical profession, if all the x-ray therapeutic indications were accepted in such a short time. Medicine is a very difficult field of human endeavor; the patient should not wait; the innovations, however, are difficult to learn, and to test, and only gradually do they gain the confidence of physicians."

A search of the literature in an effort to crystallize the definition of the type of patient who should receive radiation therapy for fibromyomata shows as would be expected a rather wide diversity of opinion. Dependent somewhat it would appear upon the enthusiasm of the author. Thus, Schmitz reports that of a series of 142 myomata 10.79 per cent received radiation, while Berclere lists as the contra-indication for radiation those "cases which for some urgent reason surgical intervention becomes absolutely necessary." Miller considers that 30 per cent of fibroids are suitable for radiation therapy. Ward, discussing Miller's paper, puts it from 70 per cent to 90 per cent and Christie is the author of the conclusion that two-thirds of uterine fibroids are amenable to radium and roentgen therapy.

Schmitz sets out that the patient to receive radiation therapy would meet the following requirements: No treatment is required in myomata not causing symptoms. Radium treatment is indicated in myomata causing hemorrhage. If they are free from complicating pelvic infection, especially adnexitis; not

associated with complicating pelvic diseases requiring surgery, such as ovarian tumors, malignancy of the uterine body, etc.; not larger than a 4 months pregnancy; they must not be degenerative; they must not be complicated by a severe anemia out of proportion to the symptoms and clinical findings; they must not be growing rapidly, they must be located intramurally; they must not be causing pressure symptoms and they must not occur in patients with a personal or family history of neurotic tendency, and lastly there must be no doubt about the diagnosis.

Corscaden's choice of the method of treatment of fibroma is:

1st. Some form of excision if the patient is a good surgical risk, under 38 years of age; if the tumor is over 15 cm. in diameter, pedunculated, submucous or degenerating; if there is some doubt as to the diagnosis or if pain or urinary symptoms are important factors.

2nd. Radium is used if the patient is over 38 years of age, if bleeding is the important symptom; if operation is contraindicated and in young women without myomata suffering from uterine bleeding associated with tuberculosis or other serious disease where subsequent pregnancy would not be advisable.

3rd. Dilatation and curettage followed if necessary with roentgen rays are employed in young women where it is desired to cause a temporary menopause or lessening of the flow.

For years co-existent pelvic inflammations have headed the list of contra-indications. It now appears that the importance of this contra-indication has been over-estimated.

Thus Ford's statistics of the Mayo Clinic, based on 250 operated cases; the pathologist reported some degree of chronic pelvic inflammation in 41 per cent and a parallel series of 344 cases treated by irradiation presented no exacerbation of the pelvic inflammation as the result of the treatment. At the same time Pankow points out that concurrent pelvic inflammation producing wide adhesions makes operation difficult and contributes to the operative mortality,

thereby making such cases better suited to radiation therapy.

The size of the tumor to receive radium, as pointed out by Schmitz, should not exceed that of a 4 months pregnancy, Danforth limits the size to that of a 3 months pregnancy, while Neill includes in his indication for radium therapy all fibroids which in size do not exceed the height of the umbilicus, and quotes Burnam that in selected cases those fibroids which reach higher than the umbilicus. Neill points out further that those tumors which interfere with urinary function by impaction in the pelvis, more directly indicate surgical treatment than the mere size of the tumor.

The size of the tumor which is to receive x-ray therapy so far as mere size is concerned should not be of great importance. The writer has treated seven bleeding fibromyomata which reached from 1 to 5 cm. above the umbilicus, with entire disappearance of palpable tumor in five and marked reduction in two. Size then is one of the determining factors for the choice of roentgen over radium therapy.

Myomectomy appeals to one, as the most feasible method for the treatment of a fibromyomata. Thereby, the patient in the child bearing period whose tumor may be removed retains the function of the uterus and ovaries and receives the ideal treatment. Miller, however, estimates that myomectomy is feasible only in 12 per cent of patients in this age period. Neill points out that the mortality is higher than in hysterectomy and when performed where hemorrhage is a symptom often does not bring relief.

All authors agree and it would appear rationally so, that the degenerative or calcified tumors should not be treated by radiation, furthermore, that patients presenting evidence of acute infection accompanied by fever as the result of the inflammation of the adnexa or of the degeneracy of the tumor, surely constitutes an outstanding contra-indication to radiation treatment.

Furthermore, it is agreed and rationally so, that those patients who present a severe anemia out of proportion to the symptoms should at least receive a pre-

liminary curettage with biopsy in order to rule out possible presence of malignancy of the body. This then is another factor in choice of type of radiation to be employed.

The possibility of an accompanying malignancy is probably the second long standing argument against radiation treatment. It has been shown, however, that the incidence of sarcomatous change of the fibroid is extremely small and further that no treatment is successful. Wood quotes the record of the St. Luke's Hospital of New York, to show that 19 sarcomas were found in 2,438 fibromyomata uteri, and that the incidence of carcinoma of the body of the uterus complicating fibroids, was .5 per cent. "Thus," he says, "the total mortality of malignant growths if unrecognized and irradiated would still be less than that due to surgery. There is no evidence in the cases studied that roentgen treatments made the patient liable to carcinoma or sarcoma and a survey of the literature shows the same."

The ultimate choice of the type of radiation to be used will obviously depend upon the individual problem presented by the patient and the choice of the operator. Radium is less reliable in very large tumors and in those cases where the tumor is asymmetrical with the uterine cavity. Furthermore, radium has a disadvantage of requiring hospitalization and is a minor operation. It permits, however, a preliminary biopsy, stops the bleeding more promptly and therefore, shortens the length of time the patient is under treatment, as it delivers a greater intensity or radiation effect to the myometrium. The roentgen rays may be considered as the supplement to radium, being the variant to the above notations concerning radium. The effect of the two types of radiation is essentially the same, with the exception that radium causes greater local sclerotic changes in the myometrium. Corscaden, points out that radium and x-ray produces in the ovaries and uterus changes which closely simulate those occurring in old age and that there follows the same effect on menstruation. In a very intensive study of a series of 250 cases,



Corscaden concludes that radio-therapy of a myomata or a grossly normal uterus will stop all bleeding not due to ulceration, cause the myomata to shrink more or less rapidly and will stop dysmenorrhoea, and that radio-therapy will give only partial results in the relief of pain, not associated with menstruation and urinary distress.

Radiation treatment of fibromyomata uteri therefore, offers the advantage of a lack of shortened stay in the hospital, less danger, less discomfort and mortality practically nil.

Wood quotes the records of St. Luke's Hospital of New York, to show that of 1,000 fibroids removed surgically a mortality of 1.5 per cent was experienced.

The writer believes that all will agree with Wood, that this percentage represents the minimum.

The success of radiation treatment is equally satisfactory to that of surgery. Berclere reports 700 cases of fibromyomata uteri treated by radiation, 9 of which later required surgery. A success of 99 per cent, with no mortality.

Further it must be remembered that in case of the small percentage of failure, operation has only been postponed; the patient will be in better condition for operation and no complication of the operation by reason of radiation will result.

The fact that radium and *x*-ray do produce changes in the uterus and ovaries closely resembling those changes which take place as the result of physiological old age; it would appear to leave little or no opportunity for debate as to the ideal method of handling idiopathic menopausal hemorrhage.

At the same time the suggestion of the use of radiation therapy for other symptoms of the menopause is implied, inasmuch as we are imitating nature as far as possible. Thus, the prolonged nervous manifestations including actual psychosis, headache, insomnia, etc., frequently encountered at the menopause will be favorably modified or entirely relieved in the great majority of cases by intelligent radiation therapy.

In this connection it is well to call attention to the inter-relation of the go-

noidal function and that of the suprarenal body in that many of the neural manifestations and surely those accompanied by hypertension are suprarenal in origin. Thus, neuro-sympathetic manifestations associated with discordant ovarian physiology which continue for years after all evidence of ovarian activity has ceased and in which sedatives and organotherapy yield disappointing results, radiation directed at a diminution of suprarenal function may be the therapy of choice in the future.

Other non-malignant lesions for which radiation is applicable include pruritis vulvae and pruritis ani, pruritis associated with kraurosis urethra, carbuncle, endocervicitis, particularly endocervicitis following or persistent after hysterectomy. Radiation guarantees relief of symptoms without contra-indication and it appears offers no controversy to its use.

#### CONCLUSION

A consideration of the application of radiation therapy to non-malignant lesions of the femal pelvis and a review of the literature impresses one that the possibilities of safe, economical, positive results to be obtained by radiation therapy is not generally appreciated or is being neglected.

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### Peri-Tonsillar Infections

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Read before the annual meeting of the Kansas Medical Society at Topeka, Kan., May 7, 8 and 9, 1930.

Peri-tonsillar abscesses are not as a rule the results of primary infections, but are the complications of or sequelae to: 1. Acute follicular tonsillitis. 2. Infected last molar, and 3. Following tonsillectomy.

1. The treatment of tonsillitis by a too vigorous application of silver-nitrate, may be the direct cause of the abscess, especially where the crypts have been treated separately and thoroughly with silver-nitrate, causing the mouth of the crypt to block, and the infection passing posteriorly through the pseudo-capsule of the tonsil, and resulting in the formation of an abscess. The pus generally burrows either upward to the supra-tonsillar fossae; laterally to anterior or posterior pillars, or downward. The most common site is the supra-tonsillar fossa. The tonsil is dissected from its bed and pushed toward the median line, the amount of swelling is in direct ratio to the number of days of the disease; most cases are seen on about the second or third day, five to seven days following the initial symptoms of tonsillitis. The head is held rigid and slightly bent to affected side. The chief symptoms: inability to swallow, earache, headache, constant throbbing in the throat, with anterior cervical glands swollen. The patient says he is unable to open his mouth, but as tongue depressor is placed in his mouth he can generally open it until a good field is visible. The abscesses are generally unilateral with a marked bulging and redness of the supra-tonsillar region, the whole tonsil pushed medially.

A very important sign is edema of the uvula on the side of the abscess. The edema at first is unilateral, and as abscess progresses the whole uvula is involved. The abscess side is absolutely non-mobile; on asking the patient to say, Ah! the soft palate will rise, leaving the abscess mass entirely fixed. Bilateral peri-tonsillar abscess, if of anterior pillars can be easily diagnosed, but if of both posterior pillars, can be easily over-

looked; so a careful inspection is made for all of the above symptoms plus the increase of space between the posterior pillar, soft palate and pharyngeal wall.

2. Peri-tonsillar abscess may arise from dental caries of the last molar tooth, or may be due to an extraction, where undue trauma has caused infection, the pus expanding and pushing the internal pterygoid muscle against the superior constrictor, displacing the tonsils toward the median line.

3. Following tonsillectomy, which had been performed under local anesthetic, due to faulty technic of injection, abscess may form. When injection is made through the tonsil tissue forcing contents of crypts into peri-tonsillar tissue.

A peri-tonsillar abscess never occurs in a patient having had a complete tonsillectomy, except occasionally may have abscess in the supra-tonsillar fossae, due to an acute infection of the lymphatic tissue, which may be accessory salivary glands.

#### TREATMENT

Spontaneous rupture may occur late in the disease, after four or five days, or may be delayed if there has been previous history of peri-tonsillar abscess. Occasionally the abscess may rupture through, and drain through the tonsil crypts. Chronic abscesses are sometimes encountered during a tonsillectomy. It is not advisable to wait for spontaneous rupture, but to incise early.

Pus is nearly always present on the second or third day. The region to be incised is painted with cocaine crystals, after dipping applicator in adrenalin; a general anesthetic is contraindicated. Hoople of Boston, and Guttman of Chicago, both recommend anesthetizing the sphenopalatine ganglion with topical applications of cocaine for relief of pain, for making incision, and for control of pain afterwards. An incision is made at the border of the anterior pillar, the same location as in making an incision for the removal of tonsils, the upper third; and same results are to be obtained; to get behind the tonsils with an opening of sufficient size to promote drainage. We use a cataract knife to make the incision, since the blade of



knife is small and very sharp, and pain is not so acute; and the abscess wall can generally be felt as the knife penetrates it, as an added resistance and then a cavity, if in the anterior superior fossa. After the incision has been made, a Saw-tell tonsil forcep is used to enlarge the opening at the same time depressing the tongue which aids in evacuating the pus. If the abscess is only of the posterior pillar, without swelling of superior tonsillar fossa, the incision is carried around the superior pole of the tonsil, with a Hurd separator, lifting the upper pole of the tonsil from its bed, by blunt dissection, going either anteriorly, posteriorly or both, making a large incision until the base of the abscess has been reached. Daily treatments are carried out by swabbing the cavity with mercurochrome. Hot gargles or hot normal saline throat irrigations for 24 to 48 hours are the most gratifying to the patients, using one pint at one to two hour intervals. Salicylates are of value internally. The third day after incision the patient should be well on the road to recovery.

#### COMPLICATIONS OF PERI-TONSILLAR ABSCESSSES

In two cases with bilateral peri-tonsillar abscesses there developed acute nephritis, with blood, casts, four plus albumin. In a third case an acute nephritis, abscess of anterior nares and erysipelas; all cases made a recovery. May have spreading of infection to cervical fascia, with invasion of peripharyngeal space, with fatal results from thrombosis and phlebitis of large vessels of the neck. Hemorrhage following incision may necessitate the ligation of the external carotid. A large number of fatal cases have been reported.

In a consecutive series of fifty cases the average age was between twenty and thirty years. We had three cases in five year old children. One attack always makes a patient susceptible to the second.

We do not believe in removal of tonsils in the presence of an acute inflammation of the throat, but advise all cases to have a tonsillectomy.

### Eight Years of Insulin

RALPH H. MAJOR, M.D.

Read before the Reno County Medical Society, December 13, 1930.

In the year 1920, a young orthopedic surgeon located in London, Ontario. He had spent four thrilling years in France with the Canadian army, his war experience consisting largely of efforts to make maimed and mutilated men into useful members of society. So it was only natural, perhaps, that when the World War was over, he should continue this work and attempt to do in peace times what he had done during the war.

This young man, Frederick Grant Banting, was a graduate of the University of Toronto and had spent most of his life in that part of Canada so intimately interwoven with the childhood and young manhood of that very illustrious Canadian physician, William Osler. It is a matter of some interest that the register of the parish Church at Bond Head, Ontario, which was served by the Reverend Featherstone Lake Osler, contains, on the same page, a record of the christening of the Reverend Osler's son, William Osler, and of Thomas Banting, father of Frederick Banting. Harvey Cushing tells us also that while young Banting was a college student, Dr. Osler, then Regius Professor at Oxford, delivered an address in Toronto on the "Treatment of Disease," in which he said, "As our knowledge of the pancreatic function and carbohydrate function becomes more accurate, we shall probably be able to place the treatment of diabetes on a sure foundation."

Cushing continues that, "It would be very pleasant to imagine a young man named Banting, preparing to enter the Toronto Medical School, who, aware that his parents had been neighbors of the Oslers in the frontier days of Bond Head, had dropped in to the lecture in time to hear these words which rested uneasy in his mind until insulin was discovered." There is no evidence, however, that such a train of events occurred. The young surgeon who had located in London, was interested not in metabolism, but in orthopedic surgery,

and in the very practical problem of making a sufficient income to pay his office expenses and his board bill.

Banting tells that his entry into practice was not attended by any phenomenal success. He kept office hours faithfully and regularly for twenty-eight days before his first patient presented himself and, at the end of the first month, found exactly four dollars on his books! To employ his spare hours, which were many, he obtained a position as demonstrator of physiology at the Medical School of the University of Western Ontario. This gave him an opportunity to work in the laboratory and, also, as every teacher of students knows, made extensive reading necessary.

One evening in October 1920, Banting, while preparing for his class work, read an article by Moses Baron in "Surgery, Gynecology and Obstetrics." This article described some experiments in which the pancreatic duct in dogs was ligated, producing a complete atrophy of the acinar tissue, but no change in the Islands of Langerhans. After reading this interesting article, he went to bed, but found that he could not sleep and presently an illuminating train of thoughts followed. If the Islands of Langerhans contained an internal secretion, why not perform such an experiment as Barron had described and, after all but the islands had degenerated, remove the pancreas and extract this secretion. After lying in bed for a time, he got up, found his notebook and wrote in it: "Ligate pancreatic ducts of dogs. Wait six or eight weeks for degeneration. Remove the residue and extract."

Banting probably feared that on the following morning he would forget all about it. But there was no danger of this. In the early part of the nineteenth century, Sir William Gull, in commenting upon Frederick Pavy's investigations in diabetes, asked, "What sin has Pavy committed, or his fathers before him, that he should be condemned to spend his life seeking the cure of an incurable disease?" Banting, from this time, to paraphrase Gull's remark, seemed to be doomed to seek the cure of an incurable disease.

The young orthopedic surgeon seemed to forget his interest in crooked legs and ankylosed joints—and was obsessed only by the thought of trying to cure an incurable disease. He discussed the problem with his colleagues and, upon their advise, went to Toronto, where he told of his plans and hopes. At Toronto he was received courteously, but asked frankly how he, an orthopedic surgeon, with no particular scientific training, could hope to solve a problem which had baffled the greatest minds in science for centuries.

Banting returned to London a trifle discouraged, but as determined as ever to follow up his thought which had become such an obsession. After turning the whole matter over in his mind, he suddenly made a bold move; he closed his office, sold his surgical instruments, and went up to Toronto to work at this problem which had tormented him for months. In the laboratory at Toronto, he was assigned a place and was told that he could have a medical student to assist him in his work. Two students applied, but since there was room for but one, a coin was tossed, and Charles H. Best, a second year medical student, won the toss and started to work. The rest of the story is well known. They began their work in May 1921, discovered insulin the same year and published their results early in 1922. Banting discovered insulin less than a year after he had gotten up out of bed to make the entry in his notebook and, one year after the struggling young orthopedic surgeon left London, he was a famous man. Banting, at thirty, and Best at twenty-three, were enrolled among the immortals in medicine. There are few parallels in medical or any other sort of history of such meteoric careers.

Insulin was introduced into practice in 1922. Newspapers carried the story of this great medical discovery—even the Christian Science Monitor. All sorts of fantastic rumors were heard. Some said insulin would positively cure diabetes. Others said it was a powerful remedy, but if too much were given, it would either kill the patient or injure him for the rest of his days. I remember per-



sonally hearing the rumor that the wards of the Toronto General Hospital were filled with poor blind, demented patients, groping about in the dark, bereft of both vision and reason, as the result of too much insulin.

Now from the vantage ground of eight years of use, it may be possible to discuss insulin in the light of the experience gained in the intervening years. Is it a valuable remedy or not? Where has it succeeded and where has it failed? Are its failures the result of its own limitations or of the doctors' limitations? Has it contributed to the life and happiness of patients? Has all been accomplished with insulin which possibly could be accomplished or, to put it more bluntly, has the doctor always given insulin and the diabetic patient a fair chance? These questions, especially in their various ramifications, are very difficult to answer, but a discussion of them at any rate, is possible.

The first hope that insulin aroused in both doctor and layman, was that insulin might cure diabetes. This fond hope was never entertained by Banting and his co-workers, who, from the first, described insulin as a remedy for diabetes, but not a cure. The experience of eight years has abundantly proved the wisdom of this conservatism. It was soon evident that insulin did not cure diabetes immediately, but some entertained the hope that it might, with years of employment, finally produce a cure. This hope has not been realized up to the present.

Several reports of cures after insulin treatment have, it is true, appeared in the literature. Such cures, however, even if authentic, do not prove that insulin cures diabetes, since reports of cures are found in the literature before the introduction of insulin.

Both Naunyn and von Noorden believed that a diabetic patient might recover. Joslin, however, says, "I am unwilling to state that any of my patients have been cured." This does not mean, however, that there may not be a remission in diabetes. Such apparent remissions do occur, although they are rare. I have two patients, both children, pre-

viously diabetic, who have, for three and four years respectively, had normal blood sugars and no glycosuria, on a full diet. On the other hand, another patient of a colleague's, after experiencing such a remission for two years, died in diabetic coma.

As Joslin has pointed out, the term "arrested," instead of "cured," has found general acceptance in the literature on tuberculosis, and seems an appropriate term to employ in speaking of diabetes. Some cases reported as cured have later proved to be only temporary improvements. The safest rule is still "once a diabetic, always a diabetic," although it is theoretically possible that a trauma or a severe infectious disease may produce a temporary glycosuria and hyperglycemia which clear up as the patient recovers. Such cases indeed have been described, but they differ obviously from the classical syndrome we describe as diabetes mellitus. The next questions which naturally arise are, whether insulin increases the diabetic's tolerance and whether it causes or permits regeneration of the Islands of Langerhans. There seems to be a general agreement that insulin does increase the tolerance in certain cases and that, as the disease continues, such patients become able to take more carbohydrate and reduce their insulin dosage. It is true that many patients, by dietary measures alone show an increase in tolerance, yet many patients who cannot remain sugar free on diet alone, do become sugar free and increase their tolerance under insulin. Allen states that "downward progress has not been observed in any patient thoroughly treated with insulin."

The question whether insulin stimulates regeneration of the Islands of Langerhans, is still a controversial one. Such regeneration has been described in human cases by Boyd and Robinson and by Root and Warren. In dogs made diabetic by partial extirpation of the pancreas, regeneration of the pancreatic remnant has been observed by Bliss and by Capp and Barclay. In our insulin-treated cases which terminated fatally, we have never been able to demonstrate any striking regeneration of the Islands

of Langerhans, although some evidence of mitosis has been found at times. The safest conclusion in this matter seems to be that, while some regeneration may occur at times, it does not appreciably influence the course of the disease.

Diabetic coma was obviously from the very first one condition in which startling results with insulin might be obtained. No one feature of diabetes has changed so completely since the introduction of insulin. Von Noorden said in 1912, "in a fully developed coma, one can help but little, either with diet or other measures." The picture of today presents a startling contrast.

The first month I employed insulin, five cases of diabetic coma were treated, with four recoveries. Later results were not so good, but still remarkably encouraging, when compared with earlier statistics. John, in 1929, reported 71 cases of coma with 4 deaths, and the same year, Fitz reported 23 cases of coma with 8 deaths. Such data is striking testimony of the effectiveness of insulin in diabetic coma. Before the discovery of insulin, only in rare cases did the patient recover from coma; since the introduction of insulin, recovery from coma is the rule rather than the exception. As von Noorden says in the last edition of his textbook (1927), "In the treatment of coma, insulin has celebrated its greatest triumph."

The question of employing sodium bicarbonate in the treatment of diabetic coma has been answered differently by different observers. Joslin, as is well known, employs no sodium bicarbonate. Allen, Woodyatt, John, Wilder, Graham and his co-workers at Toronto, and von Noorden, on the other hand, use alkalies. Campbell has shown that insulin, although it may diminish the number of ketone bodies, often fails to increase the alkali reserve. Hedon has shown that in experimental diabetic coma in dogs, insulin alone may fail to relieve the condition, while insulin with alkali relieves the coma. We have data on patients with diabetic coma which are quite similar to the laboratory protocols on Hedon's dogs. In our own experience, we first began using insulin alone, but feel that

our results have been better since we employed soda bicarbonate, and at present all of our coma patients received both insulin and alkali.

Joslin has treated 53 cases of coma with 6 fatalities and observes that he has used no alkali since 1916. This may seem convincing evidence against the employment of alkali. However, in 1928 he wrote, "I cheerfully acknowledge that the normal salt solution of which I have made great use, given subcutaneously, has probably acted as an alkali, although I believe, in a better way than sodium bicarbonate." So it would seem that, after all the controversy, the question is not concerning the question of alkalization itself, but concerning the method of alkalization.

The employment of insulin in diabetic gangrene has revolutionized the treatment of this complication. In some cases of gangrene in youthful patients, insulin clears up the condition completely. The first two cases of diabetic coma treated in our clinic, both young men, had gangrene of the foot and gangrene of the palate, which disappeared promptly under insulin therapy. Most of our cases of diabetic gangrene, however, occur in elderly patients who have arteriosclerosis and who show thrombosis of the vessels of the extremities. Such cases obviously cannot be cured by insulin, as it can have no effect upon sclerosed vessels or vascular thrombi. However, the use of insulin in these patients often means that the diabetic loses only a toe, instead of a leg or his life, as he would have before the Banting era.

In the year 1867, Joseph Lister, who had just developed his antiseptic method of surgery, wrote a very interesting letter to his father, who had followed with great pride and satisfaction the investigations of his son. Joseph Lister wrote, "I now perform an operation for the removal of a tumor with a totally different feeling from what I used to have; in fact, surgery is becoming a different thing altogether." So the surgeon today unconsciously paraphrases Lister's words and feels that with insulin, surgery of the diabetic is becoming a different thing altogether.



The above observations of the effect of insulin therapy upon diabetic tolerance, diabetic coma and gangrene, offer an impressive list of phenomenal achievements. A study of the effects of the discovery of insulin upon the mortality from diabetes presents, however, by contrast, a somewhat gloomy picture. When insulin was discovered, the medical profession had every reason to anticipate a marked, if not astounding reduction in the diabetic mortality. What do the statistics show?

The death rate from diabetes mellitus in the registration area of the United States for 1919, three years before the introduction of insulin, was 14.9 per 100,000, while the rate in 1925, three years after the introduction of insulin, was 16.9 or two more deaths per 100,000. Comparisons of the ratio of diabetic deaths to total deaths in Massachusetts shows that the ratio in 1920 was 0.86, while in 1925, it was 1.56, or nearly twice as high.

What do such figures mean? If we study the age groups, we are encouraged by the fact that the mortality from juvenile diabetes is distinctly lowered. Also, there is evidence that there has been a reduction the past two years. But the figures as yet give us little cause for rejoicing and certainly represent a rude shock to those rosy dreams we had when Banting's discovery was announced.

Such statistical data means, broadly speaking, either that insulin has failed in the promise of checking diabetes mortality, or that we, as physicians, have failed to employ it intelligently.

There are, to be sure, certain mitigating factors. But even admitting that many deaths are due to complications, the unanswerable fact remains that we now have a powerful weapon in the treatment of diabetes and still the mortality from diabetes is practically unchanged. It would be very hard to convince an impartial jury of intelligent laymen that the remedy itself is at fault. Such a jury would probably unanimously render the verdict that the fault lies either with the doctor or with his patient. The faults of the patient may lie beyond

our powers of correction, but our own shortcomings, we can correct.

One of the most important reasons we have not checked the mortality in diabetes is because we have not used enough insulin.

We hear now and then of a patient who is refractory to insulin. Personally, I have never seen such a patient. Joslin says, "It is hard for me to believe that an insulin refractory diabetic exists." Marcel Labbe takes the same view. Von Noorden says he has never observed such a patient. Most of the so-called diabetics refractory to insulin either have a very low carbohydrate tolerance and require unusually large doses of insulin or they are not true examples of diabetes mellitus.

Twenty per cent of the deaths from diabetes are due to coma, which, with insulin, should be a preventable complication. As a cause of death, coma is followed closely by gangrene and, as the majority of cases of diabetic gangrene follow carelessness, this complication is usually preventable.

Many cases of diabetic coma begin with gastrointestinal disturbances. The patient is nauseated, vomits, refuses his food and, because he has not eaten, the physician, dreading an overdose of insulin, reduces the insulin dosage. Such a step is often fatal, because the patient's nausea is due to acidosis and he should receive more and not less insulin. Infections often lead to coma and, here again, even though the patient takes little nourishment, he usually requires twice his average dose of insulin.

Most of this failure to administer sufficient amounts of insulin arises from a fear of severe insulin reaction, which may prove fatal. The manufacturers of insulin have warned repeatedly against overdosage. A wise warning, undoubtedly, but it has led in many instances to a state of mind in which the physician gives insulin with fear and trembling or is afraid to give it at all.

Very few cases of death from overdosage of insulin have been reported. Joslin has never seen a case and, in the last edition of his book, has collected only seven cases, in several of which the

evidence is very doubtful. Even if these cases are all authentic, this is a very low mortality when we consider that hundreds of thousands of diabetics have been treated with insulin. In many instances of supposed death from insulin, some other complication has really been responsible. We had a patient who died while receiving insulin and death from insulin shock was suspected. Autopsy, however, showed conclusively that death was the result of coronary occlusion. This death occurred several years ago, but I am still denying the rumor that the patient was killed with insulin. We recently had also a striking evidence of the natural resistance to insulin shock, if I may employ that term, in a patient who was unconscious and having convulsions for seven hours from an overdose of insulin and was completely normal two hours after receiving glucose.

This observation should not be interpreted as a defense of overdosage. Quite to the contrary, a patient should never be given, if possible, so much insulin as to produce shock. But if we do give an overdose, glucose or orange juice is an absolute specific.

But patients need never have an insulin reaction if glucose is given with insulin. In cases of marked acidosis, with threatening coma, large doses of insulin (often 100 units in twenty-four hours) should be given. If we give two or three grams of glucose with each unit, we need not fear insulin reactions.

Many physicians seem to be as afraid of giving diabetics glucose as of giving them insulin. But we must remember that ketones, not glucose, produce acidosis. I have seen a patient with a blood sugar of 1000 who was in no danger of coma and conversely, patients with a blood sugar of 200 die in coma.

Insulin is the greatest gift medicine can bestow upon the diabetic. In the treatment of diabetes, it ranks with anaesthesia and antisepsis in surgery. Unlike these two great surgical discoveries, its employment has not become universal, nor has its dosage always been adequate. The road to a better control of diabetes lies before us, well marked,

with numerous sign posts pointing the way and with the dangerous places well posted with warning signals.

—R—

### Notes On the Treatment of Gall Bladder Diseases

THOMAS G. ORR, M.D., Kansas City, Kan.

Outline of clinic given at University of Kansas Hospital during the postgraduate therapeutic clinics—November 10-13, 1930.

Before the physician can intelligently treat disease of the gall bladder he must know something of its natural history. One should recognize clinically (1) that this disease is essentially chronic, (2) mild symptoms have usually been present to a greater or less degree for from 10 to 30 years before medical relief is sought, (3) the disease is progressive but may have long intervals of comparative calm, (4) attacks of acute gall stone colic and acute cholecystitis may be storm centers varying much in frequency, duration and intensity, and (5) gall stones and definite disease of the gall bladder may be found at autopsy after a long life without any history of the disease or treatment of symptoms.

From the standpoint of pathology it is essential to know (1) that gall stones are by no means essential for gall bladder disease, (2) the chief pathology found is not within the gall bladder bile but deep in the tissues of the gall bladder wall, (3) that at times associated diseases of the liver and pancreas may be present, (4) the calculous gall bladder is more likely to develop malignant disease than the non-calculous, and (5) remote disease such as myocarditis or diabetes may be sequels to prolonged gall bladder disease.

It should be known (1) that medical treatment may relieve, but probably never cures gall bladder disease, (2) symptomatic relief does not mean a cure, (3) removal of the gall bladder is more logical than drainage because the chief evidence of disease is found in the gall bladder wall and not in its contents, (4) removal of the calculous gall bladder will probably result in a higher percentage of cures than removal of the non-calculous, (5) and the mortality of



gall tract surgery is increased by operations upon the common duct.

The medical treatment may include proper diet, removal of focal infection, use of hydrochloric acid in anacidity, non-surgical drainage with duodenal tube, cholegogues, biliary antiseptics, gastric lavage, cathartics and narcotics for acute attacks. Of this number undoubtedly those of greatest importance are diet, cathartics and narcotics. The removal of focal infection is of doubtful value in well established disease of the gall bladder in spite of the belief of some that such infection may be of etiologic importance. Hydrochloric acid is nothing more than a symptomatic treatment and of doubtful value. Non-surgical drainage, so-called, may stimulate the flow of bile and thus relieve stasis in the gall bladder and ducts and thereby relieve pain and jaundice in some cases. It is doubtful if it is of much greater value than properly administered doses of epsom salts. The only recognized cholegogues are bile or bile salts. The value of such cholegogues is still unsettled. To date no satisfactory biliary antiseptic has ever been discovered. Gastric lavage as well as vomiting will sometimes relieve symptoms of discomfort or mild pain due to a diseased gall bladder. It should be tried in selected cases.

Unquestionably a reduced, bland diet is of value in relieving discomfort in many cases. A patient should eat easily digested food and never overeat. Avoid fried foods, excessive sweets, very coarse vegetables, spiced foods, heavy meats, pies and pastries. A diet such as the following is useful in many cases:

#### BREAKFAST

Milk, one glass  
Cereal, 4 ounces with cream and sugar  
Egg, one, soft-boiled or poached  
Bread and butter  
Fruit, raw, any kind

#### LUNCHEON

Milk, one glass  
Egg, one, soft-boiled or poached  
Potatoes, baked or mashed  
Vegetables, well-cooked, any kind  
Salad  
Bread and butter

Dessert, pudding, jello or stewed fruits.

#### SUPPER

Same as luncheon.

Between meals, at bedtime and in night if awake:

1 glass of milk and crackers, bread or cake. Olive oil, 1 tablespoon, three times daily with meals.

A saline laxative in hot water before breakfast is often very effective in relieving symptoms. In acute attacks with severe colic nothing but an adequate dose of morphine will suffice to relieve pain. In some patients hyperacidity may be a factor and may be relieved by giving sodium bicarbonate, bismuth subnitrate and magnesium oxide—10 grains each every two hours. Belladonna is of value in the pain of pylorospasm.

What is to be expected of medical treatment? We must not be too hopeful of medical treatment. Much too often it is a temporizing measure and a poor makeshift for the proper treatment which is surgery in so many cases. Medical treatment is many times necessary to relieve symptoms or to tide the patient over an acute attack. It must be used in those patients who will not submit to operation.

The conditions arising as a result of diseased gall bladder that may require surgery are acute and chronic cholecystitis, gall stones both in the gall bladder and common duct, cancer of the gall bladder or involving the ducts, strictures of the ducts, biliary fistula, bile peritonitis and postoperative adhesions.

The treatment of acute cholecystitis should usually be conservative allowing the acute process to subside before an operation is done. There are decided exceptions to this rule which can only be determined by a careful study of each individual case, noting carefully its progress to determine if danger is imminent from rupture of the gall bladder, gangrene or ascending duct infection. There are instances when an emergency operation is justifiable but such cases represent only a small percentage. There is very little difference of opinion among surgeons at present in regard to the proper surgical treatment of chronic

cholecystitis. With rare exceptions it is generally agreed that if a gall bladder is sufficiently diseased to require surgery it should be removed. The dissenters from this opinion only emphasize its validity. The so-called internal biliary drainage is indicated in irreparable obstruction of the common duct by anastomosis between the gall bladder and stomach or duodenum. The chief indication is carcinoma involving the common duct. The importance of careful examination and if necessary exploration of the common duct is recognized by all experienced surgeons. No gall bladder surgery should be considered finished until the operator has convinced himself that the common duct does not contain a stone or is not the seat of disease. Great care should be exercised in operations upon the common bile duct since such surgery increases the mortality. Cancer of the gall bladder is rarely amenable to surgical removal since it is so frequently inoperable when explored. Occasionally a gall bladder with evidence of cancer involvement should be removed. It is not advisable to discuss technic at this time but it is important to mention that abdominal drainage is usually advisable for the average operator when the gall bladder is removed. Bile peritonitis may develop, if leakage takes place, resulting in a serious complication. Biliary fistula now and then occurs and is usually the result of inadequate primary surgery. Fistula may be cured by dissecting free the entire tract and anastomosing the distal end into the duodenum. Others may be cured by the removal of a stone, foreign body or seriously diseased gall bladder.

A word might be said here in regard to pre and post-operative care. Less danger accompanies gall bladder surgery than formerly because patients are more completely and scientifically prepared. The jaundiced patient always presents the problems of lowered resistance and susceptibility to hemorrhage. For this condition calcium chloride in doses of 5 c.c. of a 10 per cent solution daily for three days before the operation may be given. Glucose as 10 per cent to 25 per cent solution may be given intravenously

to aid liver function and supply energy. Transfusion may be advisable in some cases. After the operation, careful observation should be made to detect hemorrhage or beginning peritonitis. This can usually be done by observing, twisting or lifting the drain and, of course, watching the general condition of the patient. Rapid pulse, vomiting and abdominal distension are signals of warning.

The sheet anchors of postoperative treatment are water, salt and sugar. Every adult should have a minimum of three quarts of liquid each twenty-four hours after operation for the first three or four days, and if vomiting this quantity should be increased. As long as there is thirst, there is a deficiency of water. It must be supplied as salt and glucose solutions by vein, by rectum or under the skin. We have found that salt solution may be given quite effectively in some cases in one pint doses by rectum every three hours until it can no longer be retained and the bowels move.

What is to be expected of surgical treatment? This cannot accurately be answered unless each type of case is considered separately. Generally speaking, in the hands of a capable surgeon we may expect 75 to 85 per cent of cures from cholecystectomy. Most cancers of the gall tract are hopeless in the present state of our knowledge and can only be temporarily relieved by surgery.

As far as symptomatic cure is concerned, disease of the gall bladder is a surgical disease. A very high percentage could be completely and permanently cured by surgery if accurately diagnosed and operated upon in the proper stage of the disease process.

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### **Some Factors Involved in Consideration of Diarrheas of Infancy**

J. A. BLONDT, M.D., Burdett

Read before the Rush-Ness County Society, September 10, 1930.

At our last meeting I was asked to prepare a paper, the subject being left open but the suggestion was made that it should touch on the diarrheas of infants. Certainly all one can do with such a subject to be presented in one evening is to touch on the most salient points.



Much of the subject matter will not be original and will be found more in detail in Mariott's *Infant Feeding*. I know of no book of such value to the general practitioner as this latest book of Dr. McKim Mariott of Washington University.

While attending Dr. Mariott's course in St. Louis about a year ago I heard the statement frequently made by various members of the faculty that they had comparatively few cases of diarrhea due to hot weather and the consequent food decomposition and fermentation in the intestine. They are one and all of the opinion that the large share of diarrheas are secondary to infection elsewhere in the body.

I do think that we all very frequently, much too frequently, overlook infection such as otitis media, mastoiditis, tonsillitis, sinusitis, pyelitis, etc., as a cause of diarrhea in children. When one does find a bulging drum, and it frequently can be found if looked for, there is nothing so striking as the rapid cessation of vomiting and thin watery stools that follow a successful myringotomy. This group of men see much more of this type of thing in St. Louis than we do here. I think there are several reasons for this. The children of our country are naturally more husky, get more unadulterated sunshine, are more free from hereditary taints of syphilis, etc., and are more able to withstand infections of the nose and throat. I also think climate and altitude are a distinct factor in predisposing to such infections.

In past years the diarrheal diseases have accounted for almost as many deaths among infants as all other causes combined. Even though there has been a progressive decrease in mortality from this cause, yet at the present time diarrhea stands in first place in published mortality rates of infants who have survived the neo-natal period. This statement is more or less misleading as infants seriously ill from any cause are likely to develop diarrhea as a terminal condition and when the original condition remains very frequently undiagnosed, diarrhea is given as the cause of death. Even if this is true the mortality

rate from infantile diarrhea is unreasonably high as most of the diarrheal diseases are preventable.

There are many reasons why infants are more susceptible to diarrhea than adults. The gastric juice contains less pepsin, rennin and very much less HCl. The gastric juice of the infant is well adapted to initiate the process of digestion when human milk is fed, due to the acidity of the stomach and upper portion of the intestinal tract. Consequently diarrhea very infrequently occurs in the breast fed baby. There are some circumstances, however, under which the gastric and intestinal secretions may be diminished.

Any infection accompanied by fever is likely to result in a decreased secretion of gastric acid and of the pancreatic and gastric enzymes. A similar result is brought about by exposure to high temperature. To me this statement is certainly true and has been made manifest to me many times this last summer when the mother would say, "Doctor, this child had a little diarrhea last Monday, but for the last two days has been all right. Today she felt so good that she played out of doors all morning, but this afternoon she is worse than ever."

I have given very little medicine to children having diarrhea this summer when I felt it to be of the fermentative type. I found the withholding of all food for twenty-four hours, followed by fruit juices the next twenty-four hours, then gradually adding cereals, toast, and soft eggs, and absolutely keeping the child out of the hot sun until normalcy had been reached has been followed by excellent results.

Before going into detail regarding diarrheas and their treatment it is necessary to have a complete understanding of the normal digestive processes of the infant.

When the chyme passes through the pylorus into the duodenum it remains for a short time before passing along toward the jejunum. While in the duodenum the food becomes mixed with the pancreatic juice, bile and some succus entericus.

The pancreatic juice is strongly alkaline and contains the enzymes trypsinogen, amylpsin (pancreatic diastase) and lipase (steapsin) capable of acting on proteins, carbohydrates and fats, respectively.

The bile is neutral or slightly alkaline and contains besides pigments, cholesterol and lecithin and the salts of the bile acids which latter are effective in promoting the emulsification of fats. The bile also contains a substance which accelerates the action of the pancreatic lipase. Bile is capable of dissolving fatty acids and to a certain extent the soaps of calcium and magnesium which are ordinarily insoluble in water.

The succus entericus secreted by the crypts of the small intestine is alkaline in reaction. It contains the enzyme enterokinase, capable of activating the trypsinogen of the pancreatic juice to trypsin, a proteolytic enzyme erepsin and an enzyme or group of enzymes capable of converting the disaccharides lactose, sucrose and maltose into the monosaccharides.

All of the secretions from and those emptied into the small intestine are alkaline in reaction with the exception of the acid chyme that enters the duodenum from the stomach, but the combined reaction after mixing with the acid chyme from the stomach is slightly acid. However, when the gastric secretion is decreased or when foods of a high buffer content are fed (such as undiluted sweet milk) the duodenal contents may become alkaline.

When the duodenal contents are alkaline, bacterial flora are likely to be present in large numbers.

Protein digestion, which may occur to a slight extent in the stomach, is continued in the duodenum thus the action of the trypsin of the pancreatic juice, which breaks up the protein molecule into the smaller remnants the peptones, polypeptides and the amino acids. These remnants that have escaped the tryptic digestion and further acted on by erepsin and are converted into the amino acids. Protein is absorbed under normal conditions only as amino acids. In infancy protein digestion and absorption is re-

markably complete even in the presence of diarrhea.

The simple carbohydrates dextrose, levulose, and galactose require no digestion and are absorbed rapidly by the small intestine. The disaccharides by action of the enzymes secreted by the small intestine are converted into the monosaccharides. When too much carbohydrate is fed or absorption is impaired, the remaining sugar that reaches the large intestine is attacked by the bacteria present and is decomposed to form gases and acid.

Amylopsin digests starches first to dextrin then to maltose. It is present only in small quantities in the intestine of the infant. Large amounts of starches are therefore not handled well. If started in small quantities, however, it seems to have a stimulating effect on the pancreas in the production of more amylopsin. Relatively little carbohydrate is destroyed in the intestine unless the digestive or absorptive powers are impaired, when large amounts may be destroyed resulting in the production of organic acids which have a distinctly irritating effect on the intestinal mucosa.

The digestion of fats begins in the duodenum. The first step being the emulsification and breaking up into very fine globules. This action is enhanced by the presence of bile salts and the churning action in the duodenum. Milk fat is already in a fine emulsion, but other fats require this process before the other steps in digestion can take place. Steapsin of the pancreatic juice accomplishes saponification. The presence of bile enhances this action. Lipase converts emulsified fat into fatty acids and glycerin and is absorbed as such. Some calcium soaps are not absorbed, some are partially dissolved by the bile. Those not absorbed pass through and appear in the stools as solid, putty like masses. In diarrhea the fats are hurried through the intestine before any appreciable quantity can be absorbed. The digestive capacity of infants for fats is less than for carbohydrate or protein either.

The large intestine secretes no digestive enzymes and any digestion tak-



ing place in the large intestine is merely a continuance of that started higher up. Very little food is absorbed by the large intestine. However, under normal conditions more water is absorbed from the large intestine than from the small.

In the large intestine bacterial activity is usually vigorous and results in the decomposition of certain food remnants, especially carbohydrates.

The most important bacteria found in the gastro intestinal tract are *B. bifidus*, *B. lactes aerogenes*, *B. coli*, *B. aerogenes capsulatus* (gas bacillus), staphylococci and streptococci.

Due to the acid reaction of the chyme, usually food entering the small intestine is comparatively sterile. When gastric secretion is decreased, however, due to high temperature, fever, etc., the growth of pathogenic bacteria is increased to such an extent that digestion (intestinal) is inhibited and toxic, irritating substances are produced that result in an inflammation and destruction of the intestinal mucosa and diarrhea.

Some strains of organisms as *B. Coli*, *Welsh bacillus*, etc., produce large amounts of protogenous amines as histamine, which would, under normal conditions, be detoxicated by passage through the liver, but due to an injured mucosa enough may be absorbed to produce nausea, diarrhea and vomiting.

It has also been shown that when the contents of the upper intestinal tract are strongly alkaline colon bacilli may pass through the mucosa and enter the blood stream.

Diarrheas that occur in well nourished infants are usually the result of temporary overfeeding, contamination of food by pathogenic bacteria, high external temperature, or parenteral infection. This type is usually of short duration if properly handled. Vomiting usually accompanies and frequently precedes this type of diarrhea.

The severer forms are usually found in undernourished children, growing infants and those suffering from acute parenteral infection. This type usually has fifteen or twenty stools in twenty-four hours which contain food remnants and soon become just brown, watery

fluid with or without blood. Frequently there is more water lost by this route than the child has taken or retained. The loss in weight is sudden and severe. With it the color becomes gray, the skin dry, the eyes appear sunken and lack lustre. The temperature may reach 105 or 106 degrees F., convulsions may occur. The urine is scanty and of high color. Casts may be present and occasionally the urine will give a positive test for sugar. The serum protein is increased and may be doubled.

All of these symptoms are explained by toxemia, anhydremia and acidosis.

Diarrhea if severe or prolonged may result in severe body tissue destruction and death due to

1. Diminished absorption of food resulting in partial starvation.
2. Loss of water.
3. Loss of mineral salts, especially fixed bases.
4. Toxemia from intestinal bacteria.

#### DIFFERENTIAL DIAGNOSIS OF DIARRHEA

1. Underlying etiologic factor.
2. History.
  - (a) Character of feeding.
    - (1) Proper constituents
    - (2) Amount
    - (3) Interval
    - (4) Free from harmful bacteria.
  - (b) History of cold, otitis media, tonsillitis
  - (c) Pyelitis
  - (d) High temperature coincident with the development of diarrhea and later pus and blood in stools suggests bacillary dysentery.
  - (e) Diarrhea occurring in infants suffering from gastric enterospasm. Hypertonic infant.
  - (f) Diarrhea due to overfeeding. Some food element in excess.
  - (g) Typhoid.

#### Prophylaxis.

- (1) See that infant is on a well balanced formula free from harmful bacteria.
- (2) Avoid exposure to high temperatures.
- (3) Sufficient intake of water.
- (4) Maintain nutrition.
- (5) Do not over clothe infant.

## TREATMENT

If one can keep in mind the processes of digestion, also the factors liable to result in producing a diarrhea, the treatment becomes more or less self evident. As in all things, the diagnosis of the kind of diarrhea is all important. The general principles of treatment of all forms of diarrhea as given by Mariott are self explanatory and need no comment.

1. Recognition and suitable treatment of parenteral infections.

2. Rest of the gastro-intestinal tract.

3. The giving of food adapted to the limited digestive capacity.

4. Restoration and the maintenance of the fluid balance.

5. Restoration and the maintenance of the mineral balance.

6. Blood transfusion in some cases.

I realize this paper is incomplete. Maybe some factors have been stressed too much and some too little. I have taken more time in explaining the digestive processes of the different food elements and some of the chemistry involved in digestion than I have with diagnosis and treatment for I believe that is the part we are more apt to forget. I think treatment, however, is an important consideration.

In maintaining fluid balance A. F. Hartman of St. Louis has devised a buffered lactic acid solution composed of

Lactic Acid U. S. P.....	15 c.c.
Sodium hydroxide 10% .....	20 c.c.
Water to make .....	1000 c.c.

This may be flavored with a small amount of saccharin or as much as 5 per cent karo may be added. The taste is not unpleasant, resembling lemonade. In this way not only is the fluid balance maintained, but the solution aids in the retardation of bacterial growth.

Frequently other means of supplying liquids have to be resorted to and Hartman has devised his so-called combined solution that can be used intravenously, subcutaneously or intra-peritoneally.

Dextrose 8—10 per cent may be given safely intravenously or subcutaneously.

When cyanosis occurs oxygen administration by means of an oxygen tent is indicated and is of value.

Fluid administration is likely to be of greater value if combined with blood transfusion.

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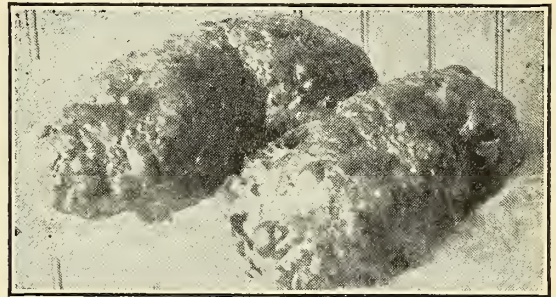
**Polycystic Kidney**

HART GOODLOE, M.D., Independence

Read before Montgomery County Medical Society at Independence, Kan., October 17, 1930.

April 6, 1929; C. H., (male, 40 yrs. of age, weight 155 lbs., automobile salesman, white, American) came to me complaining of general malaise, chilly sensations, headache, and a sore left knee.

Examination revealed a temperature of 102 degrees, a pulse of 100. On the lower anterior aspect of the left knee there was a dark sloughing mass of tissue about two inches in diameter which appeared to be deep, with a wide red area of inflamed tissue all around it. The mass was discharging pus. The lymphatic glands of the left groin were enlarged, sore and tender. The patient



**Polycystic Kidneys**

gave a history of having visited a doctor in Mound Valley 2 or 3 weeks previously for the purpose of removing an epithelioma (or eczema as it had been diagnosed) on the left knee area, anterior external aspect. The cautery paste used killed the tissue and an infection developed in the mass following a direct trauma about March 28, some eight days previous. Patient was caring for his own wound.

The patient was put to bed, the sloughing tissue removed, wound dressed with wet Dakin solution, following the Carrel method. Two or three days afterwards patient complained of swelling and dull ache in the upper right quadrant. He had had no pain or swelling previous to this time. On examination, a



large firm mass could be palpated on the right side extending from the 9th costal cartilage to McBurney's point. This mass was elongated, round and firm, and not very sensitive to palpation but very sensitive to the kidney percussion tap. Hematuria present that morning on voiding, in fact this was the first symptom that alarmed the man. The swelling with its dull ache did not convey anything significant to him. The urine examined showed acid reaction, sugar negative, sp. gr. 1024, epithelial cells, pavement and bladder cells present, kidney cells none, casts negative, crystals negative, pus cells (++) , blood cells (++++), stained for T. B. negative, stained for G negative, blood Wassermann negative.

An effort was made to catheterize the ureters and segregate the urine for examination, but this was unsuccessful as it was impossible to pass the catheter through the right ureter.

April 9th. The hydronephrosis was well marked and the mass was much larger, extending down into the right iliac fossa and much more prominent on the anterior abdominal wall. Hematuria present with numerous casts of blood clots, presumably from the ureter. There was a marked increase in urine elimination, that was dark from blood contamination.

April 12th. The hemorrhage was very slight, the urine was abundant and the tumor mass was much smaller with the absence, to some extent, of the dull ache.

April 13th. The patient was greatly improved in appearance, the tumor less tense, slight hematuria now and then, temperature 99° and patient relishing food.

April 20th. Hematuria ceased, the dull ache greatly diminished and the patient was allowed to be up and about. Refused most emphatically a cystoscopic examination and ureter catheterization. Polyuria forcing patient to void three or four times at night.

May 7th. There was a return of the hematuria and, on bimanual examination, a large, smooth tumor mass extending well down into the iliac region, movable with very slight pain, a marked

protrusion of the anterior abdominal wall over the upper right quadrant. This tumor mass was hard and firm. The left kidney was palpated. It was normal in size and free from any tenderness. The urine examination was practically the same as formerly reported. A clinical diagnosis of hypernephroma was made and the patient was referred to Dr. Coyle of Coffeyville for cystoscopic examination, kidney injection and x-ray. Dr. Coyle reported his laboratory findings and stated that in his opinion it was a hypernephroma.

The patient was advised to have this tumor removed at once because this type of tumor came under the class of malignant growths and that it was only a question of time before the other kidney would become involved and then it would be fatal. He refused his excuse being that it did not pain him severely, that he felt very much better, and that he did not have the money.

He made a steady improvement in general health, increasing in weight, having a better color and gaining strength. The operation idea didn't appeal to him so he consulted another doctor who advised the removal of all his teeth. This was done.

Dec. 6th. Seven months after his first attack, he reported at my office complaining of hematuria, dull aching on the left side. An examination revealed the left kidney enlarged, tender, elongated, round and firm. He was told that the left kidney was involved just like the right but this did not seem to greatly disturb him, nor did he seem worried when told that it was too late to hope for any surgical relief.

The newly involved kidney was not as large as the right kidney but seemed much more sensitive to manipulation at this time. The upper left quadrant bulged markedly but there was very little pain or pressure symptoms in comparison to the swelling. The hematuria lasted a few days, that is, off and on. Sometimes there would be just slight hematuria and at others the urine would become clear. He had lost weight rapidly, ten pounds in two weeks. He was

showing anemia and was given an iron tonic.

Feb. 2nd, 1930. Hematuria developed again for a few days and then cleared up while the abdominal bulge was increasing. His general condition was improved, having gained 20 lbs., going from 155 to 175 lbs.

April 12th. Patient complained of hematuria again, shortness of breath on exercise and general weakness. His color was anemic and he was having vomiting spells from time to time. His weight at this time was 175 lbs. No change in upper quadrant, both kidneys easily palpated.

June 4th. Abdomen in upper left and right quadrants appeared larger. Patient complained of dull ache. Tumor mass extended well down into the pelvis on each side. There was little or no difference in size. Patient had marked cachexia, general weakness markedly increased. He could only be up a half a day at a time. Any exertion increased cardiac acceleration, and slight dyspnea.

July 24th. No change in appearance except edema of the ankles, shortness of breath and a history of vomiting now and then. There was no edema of the abdomen or general anasarca present. Cardiac sounds were good.

Aug. 3rd. Vomiting continued now and then. The edema was more pronounced in ankles and extending quite a ways above the shoe tops.

Aug. 26th. Weight 165 lbs., color more cachectic, vomiting less, no change in abdomen, polyuria, general condition not so good.

Sept. 27th. At 4:30 p. m. patient dragged himself into the office unassisted, showing great mental and physical stress. He exclaimed, "Something has happened to me! My whole right side feels numb and weak. I believe I have had a stroke! I feel so queer!" He was assisted onto the examining table. A partial hemiplegia involving the whole right side of the body was easily determined. This partial hemiplegia slowly increased. The eye reflexes were normal, the facial muscles only slightly involved, the speech more so, while the legs and arms were almost totally par-

alyzed before leaving my office, a period of some thirty or forty minutes. At his request he was taken home in his own car by his family.

Sept. 28th. Hemiplegia involving the right half of the body complete.

Sept. 29th. Edema of the lungs, cardiac sounds good but more rapid. Cheyne-Stokes respiration with stertorous, noisy breathing, slight cyanosis.

Sept. 30th. Patient died at 10:30 p. m.

Oct. 1st. Autopsy held with Dr. W. J. Aldrich assisting. It revealed two large kidneys extending down into the pelvis, encapsulated with firm adhesions to the peritoneum and colon. There was little or no difference in size, general appearance, shape or weight. They were fourteen inches long, nine inches wide, and seven inches thick, with numerous cysts of variable sizes, having vari-colored tints and hues, over the entire surface of each kidney. The right kidney was opened for examination and both cortical as well as the medullary portions were involved with these cysts. Some had dark liquid contents others straw colored, some amber with urine odor, and others clear fluid. No stones or calculi found, no tumor mass. The hylus was normal and ureters normal on both sides. The liver was examined for cystic degeneration, none found. The diagnosis of polycystic kidney was made, one of the very rare varieties of malignant tumors. This is a rarer type of tumor than hypernephroma and occurs as a rule in two periods of life, viz.: immediately before and after birth and at forty years of age or over. While rare, this condition has long been recognized. Rayer gave, in 1839, a very accurate detailed account of this condition. Various theories have been advanced as to the cause of these tumors. Some authors have attempted to separate the congenital growths from those in the adult. The theory that the latter are true new growths, supported by Nauwork and Hufschmid, is not generally accepted today, nor is the opinion advanced by Virchow that they arise from an interstitial inflammation of the papillae. There are many theories but no cause has yet been brought out that has been



definitely accepted. The general opinion is that it is a congenital condition and may lie dormant until flared by some exciting cause. The diagnosis in adult cases is not easily determined. They form so suddenly, (in some cases having all the symptoms of hydronephrosis), that it is questionable if this condition does not add materially to the ultimate pathology and rapid cystic growth.

The differential diagnosis of hydronephrosis and polycystic kidney is catheterization of the ureter. The pyelogram following injection may give valuable information between neoplasm and cystic kidney, and again it may not when there is a hypernephroma with cystic degeneration. As expressed by Kelly and Burnam, "Some cases can only be properly diagnosed by surgical exploration, down to the growth."

#### TREATMENT

Treatment is largely symptomatic. Quoting Kelly and Burnam, "Nephrectomy should under no circumstances be carried out in cases of polycystic kidneys." Other authors advocate the removal of the cystic kidney if the other kidney appears normal and uninvolved. Statistics show that nearly all polycystic kidneys are bilateral and if one is removed the other immediately becomes active and terminates in a fatality.

The threefold interest in reporting this case is: first, its rarity; second, the possible immediate cause of its development; third, the enormous size of the two polycystic kidneys that were as much alike as two black-eyed peas.

—R—

#### TUBERCULOSIS ABSTRACTS

What role does calcium play in the healing of tuberculous lesions? Does the deposit of calcium hasten the reparative process or does it but replace destroyed tissue? No other mineral element has been so thoroughly investigated in tuberculosis research as calcium. Attempts to influence the course of tuberculosis by the therapeutic use of calcium have repeatedly failed. But more recent knowledge about nutrition and heliotherapy has revived interest in the subject. Calcium metabolism is undoubtedly

influenced by vitamins and by certain rays of the solar spectrum. A general review of the calcium question should be helpful in evaluating the claims and theories of recent writers. The following notes are derived from the November, 1930, American Review of Tuberculosis in an abstract of a paper by R. Monceaux in the *Revue Belge de la Tuberculose*.

#### CALCIUM EXCHANGE IN PULMONARY TUBERCULOSIS

Boyer, in 1869, declared that the lung undergoes a decalcification in phthisis, but it is chiefly to Ferrier that latterly accepted theories are to be credited. Ferrier's experiments were crude and his evidence was not convincing, but he added other arguments that had to do with the relation between dental caries and bony dimineralization, the calcium reserve, and other suggestive observations. Most French authors contend that decalcification begins in the early stages of tuberculosis and disappears in advanced cases. This they determined simply by estimating the amount of calcium excreted in the urine. Robin gives the normal urine calcium as 0.281 gms. per day.

#### COMMENT ON DECALCIFICATION THEORY

To consider only the degree of calcuria is very misleading for it may vary from 0.16 to 0.69 gms. on an identical regimen. In fact, most of the calcium is ordinarily excreted in the feces. The only really scientific method of estimation is to determine the calcium balance or relation between total intake and output. This has been done in tuberculous patients, at rest and on a measured ration, and a negative balance was found in certain patients in whom active disease caused wasting. In these cases, a dose of 2 gms. calcium oxide per day was necessary to compensate the loss. Except for these conditions, tuberculous persons behaved about normally and consumed daily about 1.5 gms. calcium oxide. Hence, it was concluded that decalcification is not a specific characteristic of tuberculosis but is associated only with denutrition. One investigator even found positive balances in a number of tuberculous persons.

Ferrier declared that dental decalcification went hand in hand with body decalcification. Others have been unable to confirm this, and Villemin pointed out that in rachitic children dental lesions were rare.

Barkus was unable to determine any loss or any increase of calcium as cure occurred and in guinea-pig experimental tuberculosis could not demonstrate any diminution of calcium. Others even found an increase in animal necropsies, and some have shown that the calcium content of organs varies with the physiological state.

#### CALCIUM IN THE BLOOD

Recent studies have been made on the blood calcium. Tuberculosis *per se* causes no lowering of blood calcium. Hemoptoic patients with prolonged coagulation time showed slightly lower concentrations but the differences were slight. The normal variations are from 9.22 mgm. per 100 cc. serum to 10.78 mgm. From 120 to 130 mgm. per litre were found even in cavity and bronchopneumonic cases. The tuberculous blood is not impoverished in calcium. Moreover, variations, when they exist, are dependent on cachexia and alimentary insufficiency.

#### RECALCIFICATION

In spite of these objections, the dogma has been reiterated that the great curative principle in tuberculosis is recalcification. This is carried out (1) by administering calcium phosphate and other salts and (2) by instituting a diet regimen. The only demonstrable advantage of calcium medication is that it may act favorably on the stomach, which often in the tuberculous shows hyperchlorhydria. Calcium lactate given by mouth does not increase the blood calcium, nor will a calcium-rich dietary increase tissue calcium. In fact, in the tuberculous, calcium chloride or lactate may even increase calcium loss, especially the chloride. The glycerophosphates and carbonates are not assimilated at all and even increase calcium loss. Phosphorus and calcium have a certain optimum relation, realized in the tuberculous when there is a slight excess of calcium. If

this is exceeded, there is a tendency to the formation of insoluble calcium phosphate, which is eliminated by the intestine—therapeutic decalcification. Calcium therapy might be useful when there is insufficient alimentary calcium, as in Germany during the War, but metabolic disorders cannot be combated; that is, the organism cannot be made to fix calcium. Superfluous quantities are rapidly precipitated in the tissues for the blood is normally physiologically saturated.

#### FIXATION OF CALCIUM

It was believed that the addition of adrenalin would solve the problem, and two workers diminished calcemia under this regimen. However, these results have been questioned and it has been shown that there is always a corresponding intestinal debit. Solar ray, ultra-violet radiation, and vitamin A have been used but without effect. In rickets, only the ultra-violet rays and cod liver oil containing vitamin A protected animals, but this condition differs essentially from tuberculosis.

#### CALCIFICATION OF TUBERCLES

Calcium deposits in tubercles have been accepted as obvious proof that calcium plays a defensive role by walling off bacilli. However, calcium salts are only deposited in necrotic tissue. Calcium does not precede nor favor cicatrization of lesions and probably does not even arrest the progress of lesions. It is much more probable that calcification follows rather than effects a cure. In bovine tuberculosis, large quantities of calcium are deposited in and about progressive lesions. Also, bony tissue offers no special resistance to tuberculous infection.

Individuals who breathe lime dust all day possess a special resistance to tuberculosis. This is incontestable. But its action may well be a simple mechanical one, simulating sclerosis.

Calcium salts do not inhibit the development of the tubercle bacillus; on the contrary, they often favor growth on culture media. Neither has any favorable effect been noted in tuberculous animals.



## CONCLUSIONS

If there is no decalcification, still the tuberculous need a little more lime than normal persons to maintain a favorable balance. Calcium may stimulate phagocytosis and certain other favorable reactions. However, intensive calcium therapy, on the basis of the foregoing work, must be rejected as useless. Nature furnishes abundant calcium, especially in water, milk, eggs, and legumes. The best alimentary medium is milk, of which 0.5 litre per day, with leguminous purees or eggs, suffices. Articles which tend to precipitate calcium in the form of oxalates—rhubarb, sorrel, cocoa, endive—should be avoided. If in the presence of food rich in calcium it is not assimilated, the organism is at fault physiologically. This is often the case in tuberculosis, especially when oxidation is impaired, with a resultant tendency to humoral acidity. In such cases, phosphoric acid may be given, which indirectly favors retention of calcium. The biphosphates and lactophosphates can also be used.

## BASIC FEEDING IN TUBERCULOSIS

Mayer and Kugelman, in a preliminary report on "Basic (Vitamin) Feeding in Tuberculosis," *Journal of the American Medical Association*, December 14, 1929, attempt to evaluate the special dietary regimen for tuberculous patients advocated by Sauerbruch and Gerson. They declare that dogmatic statements are not yet warranted but admit that the favorable results observed in about one-third of the patients studied may perhaps be attributed to the effect of the dietary.

The authors maintain that the special dietary is an alkali-forming one and not acid-forming as the Germans contend. Experimental studies on the effect of acid and base-forming dietaries in rats show that animals on the base-forming dietary thrive to a maximum degree, grew rapidly, and were more active than those on the acid-forming diet. Similar studies on patients showed that the acid-base equilibrium shifted toward the basic side on base-forming diet. They believed that the inorganic constituents and the vita-

mins are the favorable factors and that the vitamins are the more important. The absorption and utilization of minerals depend on the vitamins present in the alimentary tract.

—————R—————

## Incidence of Hemorrhage In Perforated Gastric and Duodenal Ulcers

Moses Behrend, Philadelphia (*J.A.M.A.*, Dec. 20, 1930), states that perforated ulcers rarely bleed; bleeding ulcers rarely perforate. In his opinion that to defer operation for bleeding ulcer in the hope that the ulcer may not bleed again is an error of judgment. Perforative ulcers occur more frequently than bleeding ulcers. The fact that bleeding ulcers rarely perforate and perforated ulcers rarely bleed may be explained by anatomic physiologic and pathologic observations. Anatomically, there is a bloodless area around the pylorus responsible for some of the deductions; physiologically, the exuding juices prevent hemorrhage, while pathologically the age of the ulcer determines whether it is going to bleed or not.

—————R—————

## Treatment of Intermittent Claudication With Hyperpyrexia Produced by Baths

H. G. Mehrtens and P. S. Pouppirt, San Francisco (*J.A.M.A.*, Dec. 20, 1930), aver that hyperpyrexia baths, because of their safety and simplicity of administration, have a field of usefulness in early cases of vascular disease with symptoms of intermittent claudication. Even in the more severe cases this therapy may find a place because sympathetic ganglionectomy, as well as the use of intravenous hypertonic saline solution, is recommended chiefly in selected cases of Buerger's disease. Arteriosclerosis with calcification is infrequently benefited by the foregoing procedures they describe, but hyperpyrexia has in the authors' experience proved worthy of trial. The milder cases offer the better chances of improvement. Cases in which gangrene has already taken place show no amelioration.

# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - - Editor**

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### WATCH AND WAIT

At the annual meeting of the Council which was held in Kansas City, January 20, it was decided that it would be useless and perhaps unwise for us to introduce the basic science bill or any other bill at this session of the legislature. If any bills unfavorable to our interests are introduced, members will be promptly notified.

### THE COUNCIL MEETING

Ten councillors were present at the annual meeting. There was considerable discussion about various matters in which the profession is concerned but the consensus of opinion was that at this particular time we should adhere to a policy of watchful waiting.

The present incumbent was unanimously re-elected editor of the Journal.

Following the adjournment of the Council a meeting of the Board of the Bureau of Public Relations was held. There was considerable discussion concerning methods for giving greater publicity to scientific medicine. Several unsatisfactory features of newspaper advertising were mentioned. The results in some instances have not been all that

was expected. A proposal by the executive secretary of the Bureau to publish a popular health magazine in connection with the Journal received some consideration but it was finally decided to leave the matter for final action at the annual meeting.

The officers and councillors were invited to the annual banquet of the Wyandotte County Society. The dinner was excellent and the subsequent entertainment was enthusiastic.

### THE BRINKLEY MATTER

A proper understanding of the present status of the Brinkley matter will be best arrived at from the calendar of events in connection with it.

The complaint against Brinkley was filed April 29, 1930. The attorneys for Brinkley applied to the Shawnee District Court for an injunction against the Board May 7, 1930. Judge Whitcomb of the Shawnee County District Court denied the injunction May 20, 1930. Appeal was taken to the State Supreme Court June 6, 1930 and its decision sustaining the authority of the board to conduct the hearing was rendered June 13, 1930. An appeal was taken to the United States Supreme Court on June 17, 1930, and this court refused to take up the case.

The hearing by the board was begun on July 15 and continued until July 30, when a recess was taken until September 15, 1930.

On September 15 the members of the board visited the Brinkley Hospital at Milford and witnessed his operations.

The hearing was resumed on September 16 and on September 17 the Board voted to revoke the license of Dr. Brinkley.

Shortly after the order was issued revoking Brinkley's license the Attorney General applied for an injunction to restrain Dr. Brinkley and his staff from



practicing. The attorneys for Brinkley filed an application for an injunction in the federal court on October 24, 1930. Briefs in this case were filed on December 10 and on January 28, 1931, Judge Pollock decided that he had jurisdiction in the case and the injunction case would be heard by him.

To anyone who may still be in doubt as to the status of this case one might suggest a perusal of Dicken's Bleak House.

#### THE PROHIBITION QUESTION

We in Kansas are not very much interested in the modification of the regulations which have controlled the prescribing of alcoholic liquors by physicians. It is not likely that the physicians in this state will ever have any more liberty in that direction than they have now.

No doubt there are a good many of those practicing medicine here that would favor a modification of the bone dry law that would permit them to use and prescribe alcoholics but there are not very many who would actively support a bill for that purpose. It is very doubtful if a member of the legislature could be found who would be willing to introduce such a bill and very few members willing to vote for it. That doesn't mean that they are all prohibitionists, but that they believe most of the people in Kansas are.

While we are not directly concerned in the probability that the restrictions on the amount of liquor that can be prescribed by physicians will be removed or at least modified, we may be interested in the various attitudes of those who will be affected by the change. There is one group who express alarm at the danger of converting doctors into bootleggers. However, most of us have found that doctors are much like other people.

Those who bootleg the liquor they are now permitted to prescribe will just bootleg a little more, but it is hardly likely that any who have heretofore confined their prescriptions to legitimate purposes will be in any way changed by the removal of restrictions.

Another group believes that if alcoholic liquor has any therapeutic value in the treatment of human ailments those who are permitted to prescribe it should be competent to determine for themselves the amount required in each individual case. At least this is in harmony with the general principles of scientific liberty the medical profession has claimed.

If alcoholic liquors have any therapeutic value in the treatment of human afflictions, any restrictions placed upon its use affect the sick people who require it and it is a questionable policy that would make sick people suffer in order to protect a few weak doctors from the temptation to become bootleggers.

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#### R CHIPS

In the eighties, in Topeka, at a meeting of the old Academy of Medicine, something in regard to antisepsis was under discussion and one of the then prominent surgeons in attendance commented upon the beneficial effects of maggots in infected wounds. He stated that as a surgeon in the Civil war he had frequently replaced maggots that had been picked off of wounds by the soldiers. There was considerable unfavorable criticism of his remarks. At a meeting of the orthopedic section of the Royal Society of Medicine, November 28, 1930, the subject of fractures was under discussion and Mr. E. G. Slesinger is reported (Lancet, Dec. 6) as saying that he "had found in Gallipoli that the more maggots there were in a wound the better the end result. Nature's method was to supply maggots to eat the dead tissue, and the deliberate use of her method had given good results. After four days the maggots could be gently

scraped away from a clean granulating wound." In discussing the same paper Dr. Bohler is reported as saying that he "had had the same experience with maggots and had seen wonderful results from their use in osteomyelitis in childhood." From an editorial in the *Lancet* Dec. 13, we quote "Dr. W. S. Baer, of Johns Hopkins, has used the method in the treatment of osteomyelitis, septic sinuses, and such conditions with satisfactory results for over two years, and it would seem that, as an adjunct to the treatment of septic wounds, maggots are worthy of the serious attention of surgeons." The favorable action of maggots in infected wounds was observed by surgeons in the Civil war, but they preferred to use other means for cleansing these wounds. There are no virtues in the maggots of today that were not common to the maggots of the Civil war period, but there are the same objections to the recently rediscovered maggot therapy as those that made it so repulsive at that time.

The constant addition of new words to the medical vocabulary is supposed to indicate in some degree the rapid advancement of medical knowledge, but perfect and accurate knowledge of a subject can usually be expressed in very simple language. A complex phenomenon or a frequently occurring symptom complex that cannot be explained must, for convenience, be given a name. Later investigators with what they believe to be more plausible theories substitute a new name for the one then in use and subsequent similar substitutions add nothing to our knowledge but much to our vocabulary.

Fifty years ago there was commonly recognized a group of symptoms following railroad injuries and because of a theory that these symptoms were caused by some indefinite and obscure lesions of the cord it was called "railway spine" after it was shown that these suspected cord lesions could not be demonstrated the term "traumatic neurasthenia" was substituted and during the World war, perhaps because of a different association, the term "shell-shock" was used.

All of these names are confusing, none of them really indicates any clear connection of the condition designated. This is only an illustration of a large number of conditions that have been frequently renamed without accurate identifications.

Pain of any kind and from most any cause, occurring not only in the head and neck but in the trunk and extremities as well, may be relieved by anesthetizing the sphenopalatine ganglions. That seems to be the essence of a paper by Byrd in the December number of *Archives of Internal Medicine*. The list of so-called dysfunctions is limited apparently by the fact that there are a few cases in which it has not yet been tried. Among the conditions relieved one may note glaucoma, tachycardia, asthma, sciatica, frequent micturition, pleurisy, pruritis vulvae, pain of flat-foot, etc., etc. The list, occupying several pages, reminds one of the old time labels that covered bottles of patent medicines—only this is more so. The author, however, admits that it sometimes fails. For instance, there are cases of sciatica in which it seems to have no effect. There are also some of these dysfunctions in which it may fail on the second trial. One might imagine that could be the case in paroxysmal tachycardia and some other conditions that have a habit of beginning and ending rather suddenly and unexpectedly. The author makes no attempt to explain the *modus operandi* by which anesthetization of the sphenopalatine ganglion influences these dysfunctions. It would probably tax ones inventive genius to explain its effect upon the pain of flat-foot, for instance. The procedure is neither dangerous nor difficult so that anyone whose curiosity is aroused may test the effects for himself. On a nasal applicator curved a little at the end, a pledget of cotton is wrapped. The cotton is saturated with adrenalin solution and squeezed out and two drops of butyn added. This is passed through the nostril till the cotton has passed the end of the middle turbinate then turned against the outer wall and kept in contact for about five minutes, then withdrawn.



The problem of the pathogenesis of cardiac pain is considerably obscured by the inconstant post-mortem findings in cases where the pain is definitely cardiac in origin, and still further obscured by the present tendency to call all pains in the chest and upper abdomen, not otherwise accounted for, cardiac pain. One of the popular theories has been that the pain is caused by the exercise of an anoxic muscle, the anoxemia being due to changes in the coronary vessels with more or less narrowing and obstruction to the blood flow. Against this and other theories so far advanced are the post-mortem findings of extensive aortic and coronary changes in cases that have been free from pain, and the absence of these changes in other cases in which pain has been the prominent symptom. This subject was discussed at a recent meeting of the Chicago Pathological Society by Joseph Capps and a summary of his remarks was published in the *Archives of Pathology*, December. He calls attention to the many conditions with which the accepted theories are out of harmony, but finds more promise for a consistent explanation of the occurrence of pain in the theory of Nothnagel that the pain originates in the constriction of the arteries themselves. He cites, in support of the Nothnagel theory, the fact that a stone in the ureter excites pain not from distention, but only during spasmodic contraction of the muscular tube in its effort to propel the stone onward. Between attacks of colic, though the stone still distends the duct, the pain ceases. He suggests that further study should be pursued to determine if constriction or spasm is a constant accompaniment of cardiac pain; if the absence of pain after ligation of stripped arteries signifies the absence of coronary spasm; if in coronary infarct there is severe spasm and severe pain, and in other cases of occlusion there is little or no spasm and little or no pain; and if the subsidence of pain a few days after an infarct indicates the disappearance of vasoconstriction. He thinks these points may be determined by experiments.

A considerable number of pioneers in roentgenology have succumbed to the lesions acquired from exposure to the rays. The adoption of various precautions and protective appliances has apparently reduced the dangers that formerly threatened the operator. However, there seems to be other possibilities of damage to those constantly exposed. Low grades of anemia with slight leucopenia in workers with roentgen rays have been frequently observed. Several fatal cases of roentgen ray anemia and several more of radium anemia have now been reported. Wegelin has recently reported a fatal case of roentgen ray anemia in a roentgenologist who had been actively engaged in this work for ten years. After three months in which he had complained of fatigue, palpitation and dyspnoea on exertion, he was admitted to a hospital. His red cell count was then 2,000,000 and his white count 1,500. This dropped to 800,000 and 900 respectively, three days before death. The essential post mortem finding was a lack of regenerative activity of the bone marrow. There was marked atrophy of the testes. There was only slight atrophy of the lymphoid tissue.

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### Constitution and By-Laws of the Kansas Medical Society as Amended to Date.

#### CONSTITUTION

##### Article I.—Name of the Society.

The name and title of this organization shall be The Kansas Medical Society.

##### Article II.—Purpose of the Society.

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Kansas, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition, and to enlighten and direct public opinion in regard to the great problem of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

##### Article III.—Component Societies.

Component societies shall consist of those county medical societies which hold charters from this Society.

##### Article IV.—Composition of the Society.

Section 1. This Society shall consist of officers, councilors, delegates, members and guests.

Sec. 2. The officers of this Society shall be a President, a President-elect and one Vice President, a Secretary and a Treasurer, to be elected by the House of Delegates for such terms of office as hereinafter provided.

Sec. 3. The Councilors shall be twelve in number, to be elected by the House of Delegates, one from each Councilor District, and to serve for such terms as hereinafter provided.

Sec. 4. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Society.

Sec. 5. The members of this Society shall be the members of the component county medical societies or other societies approved by the Council.

Sec. 6. Any distinguished physician not a resident of this state, who is a member of his own State Society, may become a guest during any annual session on invitation of the officers of this Society, and shall be accorded the privilege of participating in all of the scientific work for that session.

#### Article V. Councilor District.

There shall be twelve Councilor Districts, comprised as follows:

First District: Nemaha, Brown, Doniphan, Jackson, Atchison, Jefferson, Marshall, Pottawatomie and Riley counties.

Second District: Leavenworth, Wyandotte, Johnson, Douglas, Franklin, Miami, Coffey, Anderson and Linn counties.

Third District: Woodson, Allen, Bourbon, Wilson, Neosho, Crawford, Montgomery, Labette, Cherokee, Elk and Chautauqua counties.

Fourth District: Shawnee, Wabaunsee, Geary, Osage, Morris, Lyon and Chase counties.

Fifth District: Rice, McPherson, Marion, Harvey, Reno, Stafford, Pratt and Kiowa counties.

Sixth District: Kingman, Cowley, Sumner, Harper, Barber, Sedgwick, Butler, Greenwood, Clark and Comanche counties.

Seventh District: Rooks, Osborne, Jewell, Mitchell, Republic, Cloud, Washington and Clay counties.

Eighth District: Lincoln, Ellsworth, Ottawa, Saline and Dickinson counties.

Ninth district: Cheyenne, Rawlins, Decatur, Norton, Phillips, Smith, Sherman and Thomas counties.

Tenth District: Sheridan, Graham, Trego, Gove, Logan, Wallace, Ellis and Russell counties.

Eleventh District: Barton, Rush, Pawnee, Edwards, Hodgeman, Ness, Lane, Scott, Wichita and Greeley counties.

Twelfth District: Meade, Seward, Haskell, Stevens, Grant, Stanton, Morton, Ford, Gray, Finney, Kearny and Hamilton counties.

#### Article VI.—Council.

The Council shall consist of the President, President-elect, Secretary, and Treasurer, ex-officio, and twelve Councilors, one Councilor to be elected by the House of Delegates from each Councilor District. Besides its duties as mentioned in the By-Laws the Council shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

#### Article VII.—House of Delegates.

The House of Delegates shall be the legislative and business body of the Society, and shall consist of (1) Delegates elected by the component so-

cieties, (2) the Councilors, and (3) ex-officio, the President, Secretary and Treasurer of this Society.

#### Article VIII.—Sections and District Societies.

The House of Delegates may provide for a division of the scientific work of the Society into appropriate sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

#### Article IX.—Sessions and Meetings.

Section 1. The Society shall hold an annual session, during which there shall be held daily general meetings, which shall be open to all registered members and guests.

Sec. 2. The time and place for holding each annual session shall be fixed by the Council.

#### Article X.—Terms of Office.

Section 1. The term of office of the president shall be for one year and shall begin on the first day of January following his election. The term of office of the president-elect shall be from the date of his election until the first day of January following. The terms of office of the vice president and the treasurer shall be for one year. The terms of office of the secretary and of the councilors shall be for three years. All of these officers shall serve until their successors are elected and installed.

Sec. 2. The officers of this Society shall be elected by the House of Delegates on the morning of the last day of the annual session, and no person shall be elected to any office who is not in attendance upon that annual session, and who has not been a member of the Society for the past two years.

#### Article XI.—Defense Board.

A Medical Defense Board consisting of three members of the Council shall be elected at the annual meeting of the Council, for a term of three years; provided, that at the first election one member shall be elected for the term of one year, one for the term of two years, and one for the term of three years. The Medical Defense Board shall elect its own chairman, and the Board shall perform such duties as are provided in the By-Laws.

#### Article XII.—Reciprocity of Members With Other State Societies.

In order to broaden professional fellowship this Society is ready to arrange with other state medical societies for an interchange of certificates of membership, so that members moving from one state to another may avoid the formality of re-election.

#### Article XIII.—Funds and Expenses.

Section 1. Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$10.00 per annum, except on a four-fifths vote of the delegates present. Funds may also be raised by voluntary contributions, from the Society's publications, and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of the Society for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be referred to the Finance Committee before action is taken thereon.

Sec. 2. The sum accruing from two dollars per capita of the annual membership dues of the Society, together with any additional funds specially appropriated, and together with any unexpended residue of previous appropriations for the same



purpose shall be set apart and constitute a Medical Defense Fund, and shall be subject to expenditure on vouchers signed by the Chairman of the Defense Board and countersigned by the President of the Society.

#### Article XIV.—Referendum.

Section 1. A general meeting of the Society may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates and, when so ordered the House of Delegates shall submit such question to the members of the Society who may vote by mail or in person, and if the members voting shall comprise a majority of all the members of the Society a majority of such vote shall determine the question and be binding on the House of Delegates.

Sec. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum provided in the preceding section, and the result shall be binding on the House of Delegates.

#### Article XV.—The Seal.

The Society shall have a common seal, with power to break, change or renew the same at pleasure.

#### Article XVI.—Amendments.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates present at any annual session, provided that such amendment shall have been presented in open meeting at the previous annual session; or that it shall have been recommended by the Council and published twice during the year in the Journal of the Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

### By-Laws

#### Chapter I.—Membership.

Section 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be prima facie evidence of membership in this Society.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of the proceedings until he has been relieved of such disability.

Sec. 3. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified, by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

Sec. 4. Members of this Society may be enrolled as emeritus or honorary members upon the certified recommendation of the component county society to which they belong. Such recommendation may be based on years of faithful service in the profession, or on other grounds acceptable to the Council. Such emeritus or honorary members shall be entitled to all the benefits and privileges of active members, but shall be exempt from the payment of dues and assessments.

#### Chapter II.—Annual and Special Sessions of the Society.

Section 1. The Society shall hold an annual session at such time and place as has been fixed at the preceding annual session by the Council.

Sec. 2. Special meetings of either the Society or the House of Delegates shall be called by the President on petition of twenty delegates or fifty members.

#### Chapter III.—General Meetings.

Section 1. All registered members may attend and participate in the proceedings and discussions of the general meetings and of the sections. The general meetings shall be presided over by the President or by the Vice President, and before them shall be delivered the address of the President and the orations.

Sec. 2. The general meeting may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and the public.

#### Chapter IV.—House of Delegates.

Section 1. The House of Delegates shall meet on the first day of the annual session. It may adjourn from time to time as may be necessary to complete its business; provided that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every twenty members, and for each major fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate.

Sec. 3. Twelve delegates shall constitute a quorum.

Sec. 4. It shall through its officers, Council and otherwise, give diligent attention to and foster the scientific work and spirit of the Society and shall constantly study and strive to make each annual session a stepping stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county of the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the state who can be made reputable has been brought under Medical Society influence.

Sec. 7. It shall encourage post graduate and research work, as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

Sec. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the constitution and by-laws of that body.

Sec. 9. It shall, when the best interests of the Society and profession will be promoted thereby, organize in each district a medical society, and all members of the component county societies, and no others, shall be members in such district societies.

Sec. 10. It shall have authority to appoint committees for special purposes from among the members of the Society who are not members of the House of Delegates. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

Sec. 11. It shall approve all memorials and resolutions issued in the name of the Society before the same shall become effective.

#### Chapter V.—Election of Officers.

Section 1. All elections shall be by ballot, and a majority of the vote cast shall be necessary to elect.

Sec. 2. The election of officers shall be the first order of business of the House of Delegates, after the reading of the minutes on the morning of the last day of the general session.

Sec. 3. Any person known to have solicited votes for or sought any office within the gift of this Society shall be ineligible for any office for two years.

#### Chapter VI.—Duties of Officers.

Section 1. The President shall begin his term of office on the first day of January following his election and shall serve for one year. He shall preside at all meetings of the Society and of the House of Delegates; shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the state during his term of office, and, as far as practicable, shall visit by appointment the various sections of the state and assist the Councilors in building up the county societies and in making their work more practical and useful.

Sec. 2. The President-elect shall serve as such from date of his election until the first day of January immediately following. He shall assist the President in the discharge of his duties and shall preside, in his absence, at the meetings of the Society, and shall be ex-officio a member of the Council at large. In the event of the death, resignation or removal of the President, he shall immediately succeed to that office. In case of a vacancy in the office of President-elect by death, resignation or removal or succession in office, the Council shall elect the Vice President to fill such vacancy.

Sec. 3. The Treasurer shall give bond in the sum of \$2,000. He shall demand and receive all the funds due the Society, together with bequests and donations. He shall pay money out of the Treasury only on a written order of the President, countersigned by the Secretary; shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the funds in his hands.

Sec. 4. The Secretary shall attend the general meetings of the Society and the meetings of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He shall be ex-officio Secretary of the Council. He shall be custodian of all record books and papers belonging to the Society, except such

as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the annual session. He shall, with the co-operation of the secretaries of the component societies, keep a card index register of all the legal practitioners of the state by counties, noting on each his status in relation to his county society, and, on request, shall transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their elections, committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making their annual reports, shall keep an account with the component societies, charging against each society its assessment, collect the same, and at once turn it over to the Treasurer. Acting with the Committee on Scientific Work he shall prepare and issue all programs. The amount of his salary shall be fixed by the House of Delegates. His bond shall be for the sum of one thousand dollars.

#### Chapter VII.—Council.

Section 1. The Council shall meet on the first day of the regular session, and daily during the session, and at such other times as necessity may require, subject to the call of the chairman, or on petition of three Councilors. It shall meet on the last day of the annual session of the Society, to organize and outline work for the ensuing year. It shall elect a Chairman and Clerk, who in the absence of the Secretary of the Society, shall keep a record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates.

Sec. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit the counties in his district at least once a year, for the purpose of organizing component societies where none exist; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work, and of the condition of the profession in each county in his district, at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of his duty herein imposed, together with per diem, not to exceed five dollars (\$5.00), may be allowed by the House of Delegates, on a properly itemized statement, but this shall not be construed to include the expense in attending the annual session of the Society.

Sec. 3. The Council shall be the Board of Censors of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Society. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or component societies on which an appeal is taken from the decision of an



individual Councilor, and its decision in all such matters shall be final.

Sec. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies when organized and chartered, shall be entitled to all the rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 5. The Councilors shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary. All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Society. As the Finance Committee it shall annually audit the accounts of the Treasurer and Secretary and other agents of the Society, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary or the Treasurer, the Council shall fill the vacancy until the next annual election.

Sec. 6. The Council shall have power to create committees from its number and to endow them with authority to act in the interim between annual meetings of the Council upon all matters which would ordinarily require called or special meetings of the Council.

#### Chapter VIII.

Section 1. It shall be the duty of the members of the Defense Board severally or collectively to investigate all claims of malpractice made against members; to take full charge of all cases which after investigation they will have decided to be proper cases for defense, and prosecute such defense to the end, pay all costs of such defense, but they shall not pay or obligate the Medical Defense Board or The Kansas Medical Society to pay any judgment rendered against any member upon the final determination of any such case. They shall be empowered to contract with such agents or attorneys as they may deem necessary.

Sec. 2. The assistance for defense, as herein provided, shall be available only for members of The Kansas Medical Society in good standing. No member shall be defended for an action unless he was a member of the Society and a resident of the state at the time when the alleged malpractice was committed.

Sec. 3. It shall be the duty of any member of this Society threatened with a suit or suits for malpractice, to immediately notify the president of the county society of which he is a member, who shall at once send him an application blank, for the names of witnesses and so forth, and on receipt of this blank properly filled in, the president shall immediately appoint a committee, of which he shall be the chairman, and they shall proceed to investigate the charge made against such member.

Sec. 4. This committee shall examine the defendant member and his witnesses, if necessary under oath. If the committee shall agree that it is a case to be defended, it shall so report to the Chairman of the Defense Board of this Society.

If this county committee shall decide that it is not a case to be defended, the defendant may appeal direct to the Defense Board of The Kansas Medical Society, which shall in all cases have the final decision whether a case is to be defended or not. The findings of these committees, if unfavorable, are to be communicated to the defendant alone.

#### Chapter IX.—Committees.

Section 1. The standing committees shall be as follows:

- A committee on scientific work
- A committee on public policy and legislation
- A committee on public health and education
- A committee on Medical School
- A committee on Stormont Medical Library
- A committee on necrology
- A committee on history
- A committee on arrangements
- The Bureau of Public Relations
- The Executive Committee of the Council
- Committee on Hospital Survey.

These committees shall be appointed by the president except as hereinafter otherwise provided; and the members thereof shall serve for one year or until their successors are appointed except as hereinafter otherwise provided.

Section 2. The committee on scientific work shall consist of three members, of which the secretary shall be one, and shall determine the character and scope of the scientific proceedings of the society for each session, subject to the instructions of the House of Delegates. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

Section 3. The committee on public policy and legislation shall consist of three members and the president and secretary. Under the direction of the House of Delegates it shall represent the society in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

Section 4. The committee on public health and education shall be composed of five members and shall work under the direction of this society and its council to spread among the lay public a knowledge of preventive medicine and especially a knowledge of cancer and the importance of an early diagnosis. It shall, in so far as possible, work in conjunction with the committee of the American Medical Association of like name.

Section 5. The committee on Medical School shall be composed of five members. It shall be the duty of this committee to secure the data available concerning the activities, progress and needs of the University of Kansas School of Medicine and make an annual report of the same to this society; it shall also endeavor to establish and maintain a close relationship between the said school of medicine and this society.

Section 6. The committee on Stormont Medical Library shall be composed of three members at least one of whom shall be a resident of Topeka. It shall be the duty of this committee to formulate and recommend to the state librarian, rules for the use of, and lists for the purchase of medical books, charts and magazines for the Stormont Medical Library, at such time as accumulated funds may justify, in accordance with the provisions of Section 75-2525 and Section 75-2529 of the revised statutes of Kansas.



Section 7. The committee on necrology shall be composed of three members whose duty it shall be to collect all available data concerning those members of the society and other physicians who have died in this state during the year and make a report at the annual meeting of the society.

Section 8. The committee on history shall be composed of three members whose appointment shall be permanent; provided that vacancies occasioned by death, resignation or removal may be filled by the president. It shall be the duty of this committee to collect, preserve and compile all available data concerning the history of this society and the history of medicine in Kansas, and to make annual reports of their findings to the society.

Section 9. The committee on arrangements shall be appointed by the component society of the county in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the society, of the council and of the house of delegates, and of their respective committees, and shall have general charge of all the arrangements. Its chairman shall report an outline of the arrangements to the secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

Section 10. Bureau of Public Relations. The president, secretary and treasurer of the society, the chairman of the Defense Board, the chairman of the Committee on Public Policy and Legislation, the chairman of the Committee on Public Health and Education, the chairman of the Committee on Medical School and the editor of the Journal shall constitute the Bureau of Public Relations, whose duty it shall be to co-ordinate the functions of the various committees and departments represented in the bureau in carrying out the purposes of the society. If and when deemed expedient the Bureau of Public Relations shall appoint a secretary who shall, under the directions of the members of the bureau, conduct such publicity campaigns as may further the purposes of the society, assist in securing desirable legislation and in the prosecution of violators of the laws now on the statute books governing the practice of the healing art, and perform such other duties as may be directed by the society.

Section 11. The Executive Committee of the Council shall be composed of the president, secretary and treasurer of the society, who are ex-officio members of the council, and the chairman of the Defense Board. This committee shall have authority to act in the interim between regular meetings of the council upon all matters which would ordinarily require called or special meetings of the council.

Section 12. The Committee on Hospital Survey shall be composed of three members appointed by the president. It shall be the duty of this committee to make surveys of the hospitals of the state and co-operate in this and other ways with the committee of the same name of the American Medical Association.

#### Chapter X.—County Societies.

Section 1. All county societies now in affiliation with this Society, or those which may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, on application, receive a charter from and become component parts of this Society.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a Medical Society shall be organized in every county in the state in which no component society exists, and a charter shall be issued thereto.

Sec. 3. Charters shall be issued only on approval of the Council and shall be signed by the President and Secretary of this Society. On the recommendation of the Council, the House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution or By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the councilor for the district if necessary, and all the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

Sec. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered physician who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity to become a member shall be given to every physician in the county who is eligible, as hereinafter provided.

Sec. 6. Any physician who may feel aggrieved by the action of the society of his county, in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and its decision shall be final, and determine whether or not the physician appealing shall hold membership in the society.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. A member removing from one county to another shall automatically become a member of that component society in whose jurisdiction he resides, without other formality than the transfer of his name on the membership rolls, and the Secretary of this Society shall make such transfer when informed of such change of residence, and shall notify the secretaries of the component societies concerned of such transfer and they shall record the same.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Sec. 10. Each component society shall have general direction of the affairs of the profession in the county and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county, and systematic efforts shall be made to each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At some meeting in advance of the annual session of this Society, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Society in the proportion of one delegate to each twenty members or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Society at least ten days be-



fore the annual session.

Sec. 12. The secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary. In keeping such roster the secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 13. The secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Society on or before the first day of February of each year.

Sec. 14. Any county society which fails to pay its assessment, or make the report required on or before the first day of February, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any business or proceedings of the Society or the House of Delegates until such requirements have been met. And a member of any component society who is shown in said report to be in suspension shall not be reinstated by said component society without formal action at a regular meeting of such society, following upon a favorable report of its board of censors, said action to be certified to the Secretary of this Society with notice of the member's reinstatement.

Sec. 15. Physicians residing in counties where no component county society exists, who hold membership in any district medical society, independent or otherwise, whose principles or organizations are recognized by the Council as not incompatible with those of this Society, may by virtue of such membership be accepted as members of this Society. Applicants for membership in this Society under this provision must have their credentials certified to this Society by the proper officials of the given district society; but their membership dues must be paid by them directly to the Secretary of this Society.

#### Chapter XI.—Miscellaneous.

Section 1. No address or paper before the Society, except those of the President and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject, except by unanimous consent.

Sec. 2. All papers read before the Society or any of the sections shall become its property. Each paper shall be deposited with the Secretary when read.

Sec. 3. The deliberations of this Society shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

Sec. 4. The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

#### Chapter XII.—Amendments.

These By-laws may be amended at any annual session by a majority vote of all the delegates present at that session, after the amendment has lain on the table for one day.

### RESOLUTIONS

Resolved, That the House of Delegates adopt the design of the emblem used at this meeting as a permanent emblem of the Kansas Medical Society. (Adopted session of May, 1926.)



Description of Emblem: Gold staff and serpent on a green cross on a white background with the name Kansas Medical Society in gold letters around the margin.

Resolved, By the House of Delegates of the Kansas Medical Society, that any member of this Society shall be regarded as unethical, who organizes, conducts, or participates in the operation of a free clinic which is not under the continuous approval and supervision of the County Medical Society having jurisdiction where the clinic exists. (Adopted session of May, 1926.)

### SOCIETIES

#### JOHNSON COUNTY MEDICAL SOCIETY

At the annual meeting of Johnson County Medical Society, January 12, the following officers were elected for 1931: President, Dr. H. R. Wahl, Kansas City, Kan.; vice president, Dr. P. L. Jones, Lenexa, Kan.; secretary, Dr. D. E. Bronson, Olathe, Kan.; treasurer, Dr. R. L. Moberly, Olathe, Kan.; board of censors, Dr. R. D. Grayson, Olathe, Kan.

The time of meeting was changed from the second Monday to the first Monday of each month. Every third meeting will be held at Bell Memorial Hospital, a clinic will also be held at these meetings, at the hospital.

Johnson County Medical Society, in co-operation with the State Tuberculosis Association, held a tuberculosis clinic at Hotel Olathe, December 15. The afternoon session began at 1:30 and was devoted to the examination of patients, 24 persons were examined, eight old cases and sixteen new, most of them were contacts. Dr. C. F. Taylor, superintendent of the State Sanatorium at Norton, made the examination, the doctor was assisted by Dr. Cohn and the following nurses: Miss Bolt, Mrs. Cole, Mrs. Carey, Miss Deshler and Mrs. Grayson. x-Rays of several cases were presented.

Dinner was served about seven o'clock, later than announced because of the work of the clinic. Following the dinner, the president introduced Dr. Charles Lerrigo, who talked on the "Work of the

State Tuberculosis Association," telling what was done with the funds collected, etc.

Dr. Sam Snider of Kansas City, Mo., was introduced next. Dr. Snider talked on the "Symptoms of Tuberculosis" and also on "Treatment."

Dr. C. F. Taylor was the next speaker who talked on the "Essentials in the Treatment of Pulmonary Tuberculosis," he illustrated his talk by showing x-ray films of cases under treatment at the State Sanatorium.

D. E. BRONSON, Secretary.

#### DECATUR-NORTON COUNTIES SOCIETY

The Decatur-Norton County Medical Society met Wednesday, January 14, 1931, in the administration building of the State Sanatorium as guests of the staff.

The following program had been arranged:

Business meeting, 1:30 sharp. Election of officers.

Ways and Means of Diagnosing Tuberculosis in Children—Dr. Cohn, Sanatorium.

Sprue, Presentation of Case—W. Stephenson, Norton.

Pneumothorax Demonstration—Dr. Taylor, Sanatorium.

Foreign Body in Lung (Case)—Dr. Bryan, Sanatorium.

Dinner at Sanatorium Dining Room.

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#### Meeting of the American Association for the Study of Goiter

The American Association for the Study of Goiter again offers an award of three hundred dollars (\$300.00) for the best essay based upon original research work on any phase of goiter presented at their annual meeting in Kansas City, Mo., April 7, 8 and 9, 1931. It is hoped this offer will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in the hands of the Corresponding Secretary, J. R. Yung, M.D., Terre Haute, not later than April 1, 1931, to permit the award committee sufficient time to examine all data. Manuscripts arriving after this

date will be held for the next year or returned at the author's request.

First award of the 1930 annual meeting held in Seattle was given Dr. William F. Rienhoff, Jr., of Johns Hopkins University, Baltimore. Doctors O. P. Kimball of Cleveland, Ohio, E. P. and D. R. McCullagh, Cleveland, Clinic Foundation, Cleveland, Ohio, and Robert P. Ball of the University of Louisville, received honorable mention.

#### TUESDAY MORNING, APRIL 7

Diagnostic Clinic—Dr. H. S. Plummer, Rochester, Minnesota.

Clinical Pathological Conference—Conducted by Dr. Gordon Fahrni, Winnipeg, Canada.

Opened by: Dr. Allen Graham, Cleveland, Ohio; Dr. S. D. Van Meter, Denver, Colorado; Dr. Harold Marsh, Madison, Wisconsin; Dr. Frank Dorsey, Keokuk, Iowa.

#### TUESDAY AFTERNOON, APRIL 7

Dr. H. S. Plummer, Rochester, Minnesota; Dr. J. F. McClendon, University of Minnesota; Dr. C. Toland, Los Angeles, California; Dr. Morris Ginsberg, Kansas City, Missouri; Dr. Martin Nordland, Minneapolis, Minnesota; Dr. Le Roy D. Long, Oklahoma City, Oklahoma.

#### WEDNESDAY MORNING, APRIL 8

Surgical Clinics presented by staffs of Kansas City Hospitals.

Round Table Discussion of Important Problems relating to Thyroid Surgery.

Conducted by Dr. Arnold Jackson, Madison, Wisconsin.

Opened by: Dr. E. R. Arn, Dayton, Ohio; Dr. Ambrose Lockwood, Toronto, Canada; Dr. John Pemberton, Rochester, Minnesota; Dr. J. R. Yung, Terre Haute, Indiana.

#### WEDNESDAY AFTERNOON, APRIL 8

Address—Dr. Kerwin Kinard, Kansas City, Missouri, President of the Society.

Paper—Dr. R. D. McClure and Dr. A. B. McGraw, Detroit, Michigan; Dr. Emil Goetsch, Brooklyn, New York; Dr. Fred Coller and Dr. R. D. Arn, Ann Arbor, Michigan; Dr. William Dinsmore, Cleveland, Ohio; Dr. Harry Richter, Chicago, Illinois; Dr. K. McGregor, Hamilton, Ontario.



## THURSDAY MORNING, APRIL 9

Symposium: The Goiter Heart—Dr. L. S. Milne, Kansas City, Missouri; Dr. Harold Marsh, Madison, Wisconsin.

Symposium: Preparation and After Care of Operative Cases—Dr. James Hayes, Minneapolis, Minnesota; Dr. A. E. Hertzler and Dr. V. E. Chesky, Halstead, Kansas; Dr. E. P. Sloan, Bloomington, Illinois.

## THURSDAY AFTERNOON, APRIL 9

Address—Dr. Charles Frazier, Philadelphia, Pennsylvania.

Paper—Dr. Andre Crotti, Columbus, Ohio; Dr. Allen Graham, Cleveland, Ohio; Dr. Howard Clute, Boston, Massachusetts; Dr. Fred Wetherell, Syracuse, New York; Dr. Walter Sistrunk, Dallas, Texas; Dr. Brien T. King, Seattle, Washington.

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### **Panoramic View of the Woman's Auxiliary to the A. M. A. In Four Articles**

#### **1. THE EASTERN DISTRICT**

MRS. W. WAYNE BABCOCK

According to the Constitution of the National Auxiliary the first vice president is automatically chairman of organization, the three other vice presidents being organizers for their section of the country. Mrs. Southgate Leigh of Virginia, therefore holds this chairmanship, and the eastern district is her particular responsibility. At her request a series of four articles is being prepared by her committee in order that each district may be cognizant of the progress of its own state's as well as those of the other three sections. The individual state journals have been generous in extreme in the space they have allowed their auxiliaries and this additional courtesy of reporting the auxiliary situation in other states is deeply appreciated, for there is a growing desire to know "what others are doing."

New Hampshire stands alone as the only New England state 100 per cent organized and co-operating with the national organization. Last year the state auxiliary had misgivings as to its necessity and usefulness but an urgent request from the medical society that the women remain organized, dispelled all

doubts. During the year following, Mrs. Hubbard, wife of the state president, visited every county which encouraged and stimulated the growth of unit auxiliaries.

The New Jersey Auxiliary made pilgrimages to state institutions, set apart one meeting when the mothers of physicians were entertained, and sponsored various health meetings. The Essex County Auxiliary, assisted by the physicians, succeeded in establishing a course of health talks, in co-operation with the Y. W. C. A. of Newark, emphasizing especially prenatal care and information which would aid the mothers of babies and young children. Last year Mrs. James Hunter, Jr., New Jersey's State President, visited every county as did Mrs. Walter Jackson Freeman in Pennsylvania, during her presidency. One cannot help drawing the conclusion that personal contacts are necessary for county development and success.

Virginia is active in spots. The doctors encourage the auxiliaries as they believe that through them education with regard to the menace of state medicine can be spread.

Ohio for several years has been sending representatives from a few organized counties to the national meetings but as yet there is no state organization. As our friend and advisor, Dr. Upham, lives in Ohio, it is felt that he will advise the National Auxiliary when the auspicious time arrives for the establishment of a state auxiliary.

The District of Columbia seems so completely diverted with Washington affairs that the auxiliary which so capably cared for the A.M.A. meetings some years back seems to have gone into retirement.

Delaware in a breathless, better-late-than-never manner, has completely caught up and is most interested and active and has entered upon serious work by assisting the men of the profession in establishing a medical library in Wilmington. They will co-operate with Philadelphia at the time of A.M.A. and the eastern section will introduce them with pride to the national organization. West Virginia is up and doing and

you may expect still better things from that state this year.

Maine, Massachusetts, Rhode Island, Vermont and Maryland have reported the interest of individuals but no organized effort. Queries from different localities in New York as to why there is no auxiliary have been answered with the statement that several years ago the House of Delegates voted unanimously in favor of the auxiliary and authorized its organization. The same year Connecticut voted favorably but no definite steps have been taken.

Pennsylvania has surely discovered the rhythm in which its auxiliary work is best done, for concrete accomplishments have been turned out regularly, year by year. Of the three thousand dollars contributed last year to the Medical Benevolence Fund more than two-thirds was contributed by the auxiliary. A definite trend toward educational meetings is felt all over the state and socially it is hoped that the carefully formed Philadelphia plans for the next meeting will bring honor and glory to the Keystone state. Not only are the adult members of the auxiliary meeting but a group of the most charming and good-looking daughters of doctors are working together in order that they may know each other and work in unison for the comfort and pleasure of the A.M.A. guests when they come to Philadelphia in May. Verily, who can question the wisdom of the auxiliary, when it brings about so much willing work in behalf of the medical men of the country?

—R—

#### **The Opinions of President Coolidge Concerning Federal Subsidies for Infant and Maternal Hygiene**

I have referred in previous budget messages to the advisability of restricting and curtailing federal subsidies to the states. The maternity act offers concrete opportunities to begin this program. The states should now be in a position to walk alone along the highway of helpful endeavor, and I believe it in the interest of the states and the federal government to give them the opportunity.—*Annual Budget Message of President Coolidge. Quoted in the Con-*

*gressional Record, Jan. 7, 1927, page 1219.*

I take this occasion to state that I have given much thought to the question of federal subsidies to state governments. The federal appropriations for such subsidies cover a wide field. They afford ample precedent for unlimited expansion. I say to you, however, that the financial program of the chief executive does not contemplate expansion of these subsidies. My policy in this matter is not predicated alone on the drain which these subsidies make on the national treasury. This of itself is sufficient to cause concern. But I am fearful that this broadening of the field of government activities is detrimental both to the federal and the state governments. Efficiency of federal operations is impaired as their scope is unduly enlarged. Efficiency of state governments is impaired as they relinquish and turn over to the federal government responsibilities which are rightfully theirs.—*Addresses of the President and the Director of the Budget at the Meeting of the Business Organization of the Government, January 21, 1924.*

The greatest solicitude should be exercised to prevent any encroachment upon the rights of the states or their various political subdivisions. Local self-government is one of our most precious possessions. It is the greatest contributing factor to the stability, strength, liberty, and progress of the nation. It ought not to be infringed by assault or undermined by purchase. It ought not to abdicate its power through weakness or resign its authority through favor. It does not at all follow that because abuses exist it is the concern of the federal government to attempt their reform.

Society is in much more danger from encumbering the national government beyond its wisdom to comprehend or its ability to administer, than from leaving the local communities to bear their own burdens and remedy their own evils. Our local habit and custom is so strong, our variety of race and creed is so great, the federal authority is so tenuous, that



the area within which it can function successfully is very limited. The wiser policy is to leave the localities, so far as we can, possessed of their own sources of revenue and charged with their own obligations.—*The Annual Message of the President, December 8, 1925.*

There are always those who are willing to surrender local self-government and turn over their affairs to some national authority in exchange for a payment of money out of the federal treasury. When ever they find that some abuse needs correction in their neighborhood, instead of applying a remedy themselves they seek to have a tribunal sent on from Washington to discharge their duties for them, regardless of the fact that in accepting such supervision they are bartering away their freedom. Such actions are always taken on the assumption that they are a public benefit. Somewhere, Lincoln said something to the effect that tyrants always bestrode the necks of the people upon the plea that it was for their good. He might have added that the people suffered the rule of tyranny in the hope that it would be easier than to rule themselves. We have built our institutions around the rights of the individual. We believe he will be better off if he looks after himself. We believe that the municipality, the state, and the nation will each be better off if they look after themselves. We do not know of any other theory that harmonizes with our conception of true manhood and true womanhood.—*Address of President Coolidge before the Society of the Daughters of the American Revolution, April 16, 1928.*

### BOOKS

**Abdomino-Pelvic Diagnosis in Women** by Arthur John Walscheid, M.D. Director of Obstetrical and Gynecological Department of Broadstreet Hospital, New York City, etc. Published by The C. V. Mosby Company, St. Louis. Price \$12.50.

This is quite an elaborate treatise on the diagnosis of the special diseases of women. The procedures for examinations of various kinds are very carefully described. Much attention is given to structure, normal and abnormal. In many of the conditions described care-

ful consideration is given to the possible etiologic factors. Illustrative cases are cited when they will serve to clarify the subject under discussion. There are a large number of excellent illustrations.

Clinical Allergy particularly asthma and hay fever, mechanism and treatment by Francis M. Rackemann, M.D., instructor in medicine, Harvard Medical School, Boston, etc. Published by the Macmillan Company, New York. Price \$10.50.

Everyone who is interested in this subject will find in this book about all there is to be said about it at this time. If there is anyone who is not interested in the subject he will be after reading this book. One of the striking features about it is the simple diction and one is inclined to suggest that its freedom from technicalities is an evidence of confident knowledge. The subject is fully covered and the details thoroughly discussed.

**Recent Advances in the Study of Rheumatism** by Frederick John Poynton and Bernard Schlesinger (London). Published by P. Blakiston's Son & Company, Philadelphia. Price \$3.50.

This book is a concise summary of what is now known about rheumatism, certainly not an easy accomplishment. The authors have also undertaken a classification which is also a difficult undertaking when the many uncertainties concerning etiology are considered. But they have succeeded in presenting a very modern thesis on the subject, one that can be read with interest and satisfaction.

**The Surgical Clinics of North America.** (Issued serially, one number every other month.) Volume 10, No. 6. Index number. (Philadelphia number—December 1930.) 316 pages with 95 illustrations. Per clinic year (February 1930 to December 1930.) Paper, \$12.00; Cloth, \$16.00. Philadelphia and London. W. B. Saunders Company, 1930.

A clinical lecture on cancer of the rectum by Deaver is the first article in this number of the clinics. Jackson and Babcock report a series of very interesting surgical cases. Jopson and Rothschild report a series of surgical cases. The clinic of Garnett consists of a number of quite unusual cases. Eliason and Wright give a clinic on pathologic fractures—meaning fractures that occur from slight force acting upon bone weakened by disease. Muller discusses splenectomy in primary pernicious anemia. Klopp's clinic deals with intestinal tu-

mors. Ivy and Curtiss present some complicated fractures of the mandible. Crossan has a clinic on fractures of bones of the feet. Ashhurst and Klopp discuss hemorrhoids, prolapse of the rectum in children, and fistula in ano. Ryan's clinic deals with acute suppurative osteomyelitis. Ferguson and North give their experiences with the use of splanchnic and spinal anesthesia for upper abdominal operations.

— R —

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# THE JOURNAL

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### Hip Joint Diseases

W. F. SCHROEDER, M.D., Newton

Read before the annual meeting of the Kansas Medical Society at Topeka, Kan., May 7, 8 and 9, 1930.

Disorders of the hip joint manifest themselves in all ages primarily as a disturbance in function. The maintenance of function is the primary aim in the treatment of diseases of the hip joint and the success of the treatment is dependent on the early recognition and diagnosis of the disorder that exists. To the general practitioner, as a rule, falls the responsibility for the recognition that a hip joint disease exists rather than to the orthopedic specialists. The diagnosis is sometimes obvious, sometimes more difficult, and sometimes the ingenuity and resources of the orthopedists are taxed to the utmost in diagnosis.

I shall consider the diagnosis and brief treatment of the following diseases of the hip joint:

- I. Tuberculosis of the hip joint.
- II. Acute epiphysitis.
- III. Perthes' Disease.
- IV. Coxa vara.
- V. Congenital dislocation of the hip.

#### TUBERCULOSIS OF THE HIP

Of the joints in the body invaded by the tubercle bacillus, the joints of the spine come first in frequency, the hip joint second. The site is more frequently the upper femoral epiphysis. In adults, the head of the femur is usually the primary site. Occasionally it begins in the acetabulum. As seen by the x-ray, areas of necrosis in the bone occur near the epiphysis which gradually undermine the incrusting cartilage and superficial bone until the joint is invaded. Then there is gradual erosion with destruction of the articular surfaces and adjacent bone. The acetabulum may be destroyed and the head of the femur dislocated. Enough destruction may take place so that the trochanter approximates the pelvis. Ab-

cesses come late and are a sign of the intra and extra capsular swelling and induration. Under adequate early treatment, the destructive process is more often restricted.

*Symptoms.* An early morning stiffness with lameness which disappears in a few hours is the first abnormality. Later the pain becomes more pronounced and continues during the day. The pain is referred to the knee but may also be present in the hip. "Night cries" are frequent. Of all atrophies that occur around a hip joint, the atrophy of tubercular hip leads. Induration and swelling on the anterior aspect of the joint are present when the disease is well advanced. Motion, active and passive, is obliterated by muscular spasm so that an ankylosis is apparent. At first the hip is held in flexion, abduction and external rotation, and the leg seems longer. After extensive destruction, the hip is flexed, abducted and rotated inward with an actual decrease in length. The gluteal fold in the early stage is below that of the normal side and after extensive destruction is above the normal side. This condition is rarely seen in adults and the symptoms are not so acute.

*Diagnosis.* In the differential diagnosis, psoas abscess, syphilis, subacute state of acute infectious arthritis, coxa plana, and coxa vara must be considered.

In psoas abscess there is a limp but motion is restricted only in extension, besides there may be symptoms referable to a lesion of the vertebral column. In syphilis, the symptoms are not acute until extensive destruction has taken place. The Wassermann and specific drugs are a help. In the subacute stage of acute epiphysitis, the history and x-ray are of help.

Coxa plana, Perthes' disease, is most frequently mistaken for tuberculosis of the hip. It occurs between the ages of five to ten, while tuberculosis of the hip



occurs most frequently in early childhood, from three to five years of age. In coxa plana, motion is limited in abduction and internal rotation, while in tuberculosis it is limited in all directions. Muscle spasm is severe in T. B., mild in coxa plana. Sometimes observation over a period of time is necessary for differentiation.

Coxa vara occurs during adolescence. It occurs in the neuter type of boys usually. The x-ray is conclusive.

*Prognosis.* The mortality depends on the treatment. It is low in those receiving early treatment and high in those receiving late treatment. Fusion in adults gives excellent chances of recovery. The less motion present in the joint the better the chance of cure. Secondary infection of draining sinuses is a serious complication. Tuberculous meningitis is a late manifestation of hip joint disease and is always fatal.

*Treatment.* Maintenance of the hip in most useful position for future use is the aim of conservative treatment. Plaster casts or special apparatus for individual requirements accomplish this. Of deformities, exact correction should be done gradually. Sudden force may bring on a tuberculous meningitis, which is always an imminent danger. The child with a tuberculous hip is first sick with tuberculosis, and is sick before it is lame. Constitutional care must be taken so as to raise the resistance to the disease.

#### ACUTE EPIPHYSITIS

The terminology in the literature in regard to this disease is not clear. Acute epiphysitis, acute infectious synovitis, and acute arthritis are often used synonymously to indicate an acute inflammation of this articulation. It is impossible either clinically or by the laboratory methods to distinguish them one from another early. Even later after destruction has taken place it is difficult to state where the process began.

Acute epiphysitis arises as a complication in the acute infectious diseases, as scarlet fever, typhoid fever, diphtheria, or pneumonia, or from some suppurative focus as gonorrhea, pyelitis, boils, otitis media, and the like. The infection is as a rule haematogenous.

*Symptomatology.* The onset is sudden as a rule, beginning with convulsions or chills, elevation of temperature, vomiting, prostration. There may have been arthritic symptoms involving other joints before the hip joint became affected. Acute infection of the hip joint gives rise to the following symptoms—intense pain in upper part of thigh, groin and buttock, swelling of thigh and buttock, inability to move the affected lower limb actively or passively, flexion of thigh on abdomen, dilatation of superficial veins and enlargement of regional lymph nodes.

In *Diagnosis*, the history is important. Several joints may be involved successively, clear up and then one predisposed joint, possibly the hip joint, bears the brunt. In such an event, it is a case of epiphysitis unless proved otherwise. In the examination there are three things to look for in acute hip disease: (a) increase in synovial fluid, (b) the characteristic position of the joint, (c) and the limitation of motion due to reflex muscle spasm. The increase in synovial fluid can be palpated below Poupart's ligament, which will show the tense semielastic anterior portion of the capsular ligament. The thigh is held in a position of flexion, abduction and external rotation. In this position the joint can accommodate the greatest amount of fluid with minimum tension on the capsule. Later the thigh is adducted, flexed and internally rotated. The joint is rigidly fixed in the position before named by the reflex muscular spasm which prevents motion in any direction. Diagnostic puncture is an aid in diagnosis. The results of aspiration generally establish the diagnosis. If excessive fluid is present synovial irritation is present. The fluid may be serous and sterile which indicates a mild inflammatory reaction. If it is purulent and organisms are discovered, the integrity of the joint is threatened. The gonococcus has a predilection for synovial membranes, involving bone later. Many mild strains of streptococci do similarly. Staphylococci infections are virulent and destructive. Cartilage and bone are rapidly involved. Free drainage should be instituted at once. The roentgen ray is usually of lit-

the aid in diagnosing early stages of acute epiphysitis and one must not be led astray by negative roentgen ray findings if the clinical signs point that way.

In the differential diagnosis there are a few conditions of the hipjoint in children which simulate acute pyogenic epiphysitis. These are tuberculosis of the hip, acute inguinal adenitis, acute psoitis, toxic arthritis of the hip and acute osteomyelitis of the upper end of the femur.

Tuberculosis of the hip joint is excluded by the history, clinical course, roentgenogram and laboratory studies. The symptoms are mild and insidious in development. The onset is never sudden or fulminating as it is in acute epiphysitis.

Acute inguinal adenitis is characterized by acute pain in the groin, flexion of thigh and elevation of temperature. The hip joint has all degrees of motion except extension. Usually lymphangitis is present. The constitutional reactions are not severe.

Acute psoitis is due to spasm of psoas muscle. Either perirenal suppuration or psoas abscess are present. Motion is free except extension.

Toxic arthritis is mild in character and of short duration and symptoms subside soon.

Acute osteomyelitis of the femur and acute epiphysitis are difficult to differentiate. Operation is sometimes necessary to clear the diagnosis. Arthrotomy should be performed and if fluid under tension is freed epiphysitis is present. If findings are negative, the wound can be closed and the femur trephined at the site of suspected osteomyelitis.

#### LEGG'S DISEASE

Legg's disease is an obscure affection of the hip joint in childhood between the ages of five and ten. This disease also goes under the name of Perthes' disease, Calve's disease. The name coxa plana was suggested by Jansen and is adopted by D. Lewis "Practice of Surgery." Dr. Arthur T. Legg reported his cases in June, 1909, before the American Orthopedic Association. This disease is a flat-

tening of the head of the femur with hypertrophy of the neck.

As to etiology there is no definite proof, but five factors have been considered as causative:

1. Trauma. Legg in his original paper advocated that trauma might be responsible in the production of the disease.

2. Infection. Phemister in 1922, before the American Orthopedic Association, stated that his cases support the contention that the primary lesion may be an epiphysitis of the head of the femur, and that the subsequent changes are secondary to a breaking down of the bony center, with collapse of the cartilaginous head.

3. Jansen demonstrated pelvic malformation inducing an articulation which was eccentric. Unequal distribution of weight acts as repeated trauma inducing the changes in the epiphyseal disc.

4. Rickets. Calve found rickets in his ten cases. This theory has met little support on account of the lack of rachitic manifestations locally or generally.

5. Syphilis has been suggested by Roberts but the Wassermann reaction is usually negative and other evidence of congenital syphilis is absent.

*Pathology.* Little is known of the pathology because operative measures are rarely required. From the x-ray we learn that the head of the femur becomes flattened, the femoral disc is pushed outward and upward. At the same time destruction occurs in the acetabulum which may be due to infection or mechanical irritation from the irregular head of the femur. The neck of the femur is thickened, which makes it appear shorter than its fellow. Sometimes later the epiphyseal disc undergoes fragmentation and disappears, leaving a permanent flat head without ankylosis but with deformity and restricted motion.

*Symptoms.* There is a slight limp. Slight pain usually referred to knee. Motion is limited on abduction and internal rotation and sometimes in extreme flexion. Other ranges of rotation are free. Later the leg becomes shortened from a half to an inch with moderate adduction and increasing prominence of the trochanter. This takes about a year



and sometimes resembles an acute tubercular hip.

*Diagnosis.* It must be diagnosed from tubercular hip and this can be done readily. In the tubercular hip motion is limited, in all ranges, in Legg's disease abduction and internal rotation only, with other symptoms milder.

*Prognosis.* Good in some cases, without treatment but better functional results are obtained where efficient measures are employed.

*Treatment.* Eradication of all foci of infection. Rest in bed with extension until symptoms abate and good position obtained. Operative treatment may be used in late cases.

#### COXA VARA

Coxa vara is a turning in of the hip joint. The normal angle between the neck and shaft is 160 degrees in children and often as low as 120 degrees in the aged. If the angle is below 115 degrees, the mechanics of the hip joint do not function normally. Coxa vara occurs during adolescence between ages 12-18, usually about 14-15. Coxa valga is the opposite of this condition, increase of angle due to decreased weight bearing.

*Etiology.* Because the process occurs more frequently in the neuter type of fat boys with undeveloped genitalia, an endocrine imbalance is a predisposing cause. Boys are more frequently affected, 4:1. Latent rickets is also considered as a factor. Low grade infections are also possible causative factors. Possibly coxa vara is the same pathological process as coxa plana occurring later. In coxa vara the epiphyses are displaced downward.

*Pathology.* As seen thru the x-ray there is a separation of the epiphyses. The head is displaced downward or the neck upward. The head may become flat and broad, thus getting the name "mushroom" head.

*Symptoms.* Pain is slight with no constitutional symptoms. Limitation of motion is mechanical, not due to spastic hip muscles. Internal rotation, flexion, and abduction are limited. There is slight limp, which increases.

*Diagnosis.* The x-ray is again conclusive. The age is of help since this oc-

curs in adolescence. In tuberculosis, we have limitation of motion in all directions while in coxa vara chiefly in internal rotation and abduction. In congenital dislocation normal motion is increased in all directions.

*Prognosis.* Internal rotation and abduction with slight shortening frequently results, due to arrest in growth and displacement of the epiphyses. Sometimes no functional impairment is evident.

*Treatment.* Endocrine imbalance needs proper specific glandular medication, with dietetic measures for those of excessive weight. Forceful over correction of the limitation of movement with retention in plaster for two months is of help.

#### CONGENITAL DISLOCATION OF THE HIP

The congenital dislocation or rather misplacement of the hipjoint is by far the most common and the most important of congenital misplacements.

*Etiology.* Nothing positive is known as to the cause of the misplacement. Jaeger in *Surgery, Gynecology and Obstetrics* of April, 1930, states that he believes "that there is sufficient displacement in very early life to cause pressure of the femoral head against the upper rim of the acetabulum, which pressure prevents the growth of the upper rim. Removal of this pressure is promptly followed by development of the upper rim of the acetabulum. In the first months of life, growth and development are very active. A familiar phenomenon of birth fractures is that callus is thrown out quickly and in amazing quantity." He demonstrated in his two cured cases by x-ray pictures how bone formation begins soon after removal of the resistance which retarded it.

Royal Whitman thinks that defective development is the most reasonable theory.

*Pathology.* Sometimes a rudimentary, sometimes a well developed acetabular cavity is present. The capsule is elongated for accommodation. It is hypertrophied and is often hourglass in shape. The ligamentum teres although present at birth, in a large proportion of cases, becomes attenuated and is frequently absent at open operation at five years.

A shallow secondary acetabulum is found in the ileum at the site of the pressure of the head through the adherent capsule. The upper end of the femur is usually somewhat atrophied and its head distorted. These changes are secondary to displacement.

*Symptoms.* There is a painless limp, a lunge of the body towards the short leg which has been likened to the motion of walking down stairs. Jaeger in *Surgery, Gynecology and Obstetrics* April, 1930, mentions some aids in diagnosis.

1. Habitual outward rotation of affected leg.

2. Shortening of affected leg.

3. Fullness over trochanter causing an apparent widening of pelvis.

4. Abnormal mobility of hip, especially in rotation.

5. Very noticeable difference in the inguinal folds. On the affected side, the fold is shorter, the angle is more vertical and inferior inner end is higher than the normal side.

6. Exactly the same holds for the gluteal folds.

7. The diagnosis is verified by the x-ray.

*Treatment.*

1. Open operation.

2. Replacement. Lorenz advocated replacement and the child was encouraged to walk as early as possible. Jaeger states that he gradually reduces the dislocation by use of a specially constructed splint and a pressure pad over the trochanter and after reduction, which takes three weeks, there is no weight bearing for three months. I have treated two cases of congenital dislocation but have used plaster also refraining from weight bearing for three months. In my experience the acetabuli develop well, and the femoral head in three months approaches the development of its fellow.

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### The Blood Sedimentation Test In Obstetrics and Gynecology

MARK D. BALLARD, M.A., M.D.

and

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Read before the annual meeting of the Kansas Medical Society at Topeka, Kan., May 7, 8 and 9, 1930.

The blood sedimentation test is not a new test. As early as the time of Galen, physicians noticed that in blood, drawn as a therapeutic measure, in inflammatory conditions the cells settled out much more rapidly than in normal blood. It was not generally used as a test until 1917 when Robin Fahraeus<sup>1</sup> of Stockholm, rediscovered the fact and published his article in *Hygiea* in 1918. His intention was to use this as a test for pregnancy, since he had observed that in pregnant women, in blood drawn and citrated, the cells settled more rapidly than in normal blood.

Linzenmeier<sup>2</sup> of Kiel developed a technique and applied the test to gynecological work. His technique is essentially as follows: Settling tubes 6.5 cm. high and 5 mm. bore were marked at the 1 c.c. level and at 6, 12, 18, and 24 mm. below this level. Blood was drawn from the cubital vein into a 1 c.c. syringe containing .2 c.c. of 5 per cent sodium citrate solution. The blood was then placed into the settling tube to exactly the 1 c.c. mark, the tubes were inverted to mix the blood with the anticoagulant and were then set in an upright position at room temperature.

The time was then noted when the corpuscles settled to the 6, 12, 18, and 24 mm. marks respectively. Linzenmeier then recommended using the 18 mm. mark as the most practical end point while others used the 24 mm. mark.

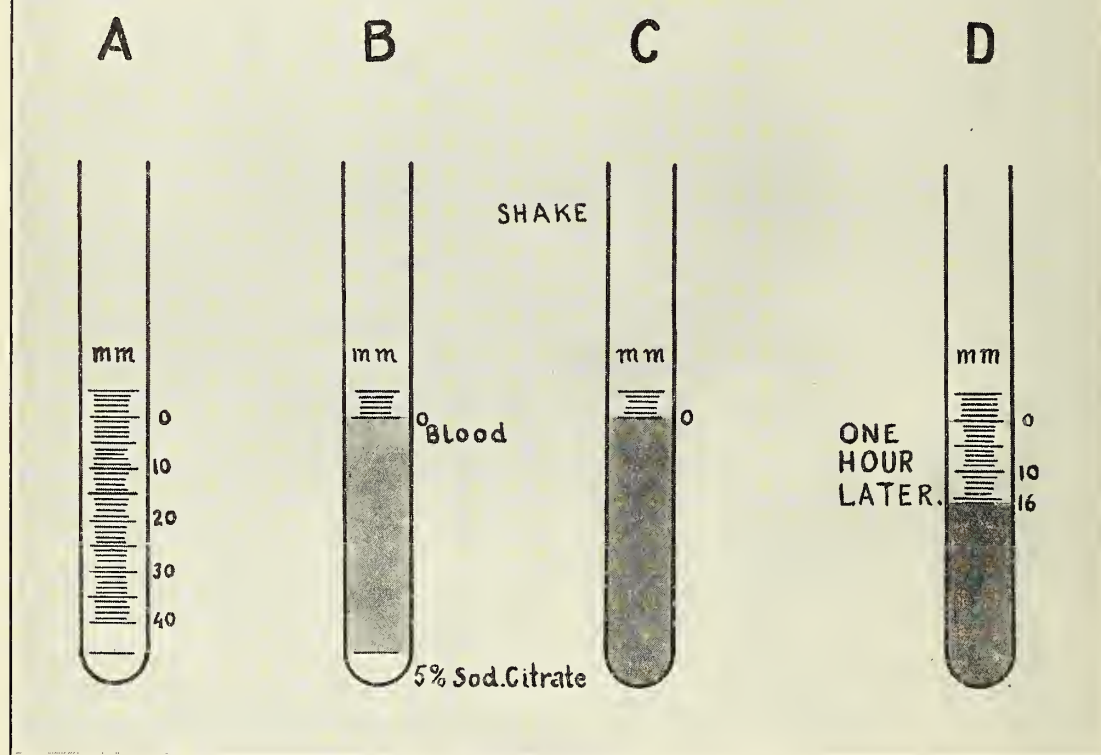
Fahraeus used glass tubes, 170 mm. in length, with internal diameter of 9 mm. Zeckner and Goodell<sup>3</sup> used 15 c.c. centrifuge tubes, graduated into mm. They read their results in one hour and measured the volume instead of the distance the cells settled, and concluded that the test was practically worthless as it was so variable. Frosch<sup>4</sup> described accurately Linzenmeier's technique using



the 18 mm. mark as the end point. He concluded that "In surgery any case having a sedimentation to 18 mm. in one-half hour, or less, should be operated on immediately because that is an indication that the inflammation is very marked and that waiting spells danger." He further stated that "In gynecology if

verse experiment was also performed by adding the serum of the latter case to the cells of the former. In this case the sedimentation time was two and one-half hours." He concluded from this that the sedimentation rate is dependent upon some constituent in the plasma rather than in the red cell.

## Figure I. Blood Sedimentation Test.



a case of salpingitis should not be operated on in the acute stage, then no case with a sedimentation to 18 mm. in thirty minutes or less should come to operation." He also devised an interesting experiment: "The serum of a patient whose sedimentation time was ten minutes, was intimately mixed with the red cells of a patient whose sedimentation time was two and one-half hours in normal proportions. This mixture sedimented to 18 mm. in twenty minutes. The re-

Baer,<sup>5</sup> using the Linzenmeier technique, decided that a sedimentation time of over two hours rules out an acute infection of any kind. Also the sedimentation test was more delicate than a leucocyte count or a temperature chart.<sup>6</sup>

Polak<sup>7</sup> found that the value of the sedimentation test depends not so much on any one test as on repeated tests on the same individual. He carefully noted the time required for the cells to reach the 6, 12, 18 and 24 mark using, prac-

tically, the same technique as Linzenmeier.

Baer and Reis popularized the test in gynecology. They were able to state that the test was not reliable as a diagnosis of pregnancy due to the variation in results but that in acute and chronic pelvic conditions the test offered a very accurate diagnostic and prognostic sign and

accurately at the end of fifteen minutes.

Cutler,<sup>9</sup> in seeking some method of determining the activity of tuberculous infections, found that blood sedimentation test was a very accurate indicator when all other signs were apparently negative. He was the first to devise the new graphic method which was used in the present study. He found that some pa-

**TABLE I**  
**Amount of Sedimentation in One Hour**

Normal Rate .....	8-12mm	
Chr. Endocervicitis .....	18 cases	6- 8mm Ave 12mm
Lacerations, Benign Tumors, Prolapse of Uterus, Menorrhagia, Cystocele, etc. ....	27 cases	4-23mm Ave 12mm
Myoma of Uterus .....	14 cases	8-28mm Ave 17mm
Carcinoma Cervix .....	5 cases	14-30mm Ave 23mm
Pregnancy .....	5 cases	14-33mm Ave 23mm
Acute Infections .....	8 cases	23-35mm Ave 29mm
Chr. Salpingitis .....	15 cases	7-36mm Ave 22mm

that its main value was in determining the safe time for operation. They believed that patients suffering from pelvic inflammation, whose sedimentation to 18 mm. occurred in less than one hour, should not be operated upon. This is in accord with the work of Frosch.<sup>4</sup>

Kilduffe,<sup>8</sup> using methods devised by Cutler, found that practically all that could be learned from the sedimentation test could be learned at the end of fifteen minutes, thus avoiding the long pe-

tients suffering from pulmonary tuberculosis, though apparently negative to physical findings, x-ray, temperature rise, and gain of weight, showed shortening of their sedimentation time if any active lesion remained. His method is essentially as follows:

Special sedimentation tubes of at least 5 c.c. capacity, graduated in tenths of cubic millimeters, each one a millimeter in height were secured from the Arthur H. Thomas Company of Philadelphia.

**TABLE II**  
**Salpingitis**

	Temperature	Leucocyte Ccount	Sedimentation in one hour	Operation	Remarks
Chronic	Normal	6.500	7mm	Yes	Uneventful recovery
	Normal	10.000	12mm	Yes	" "
	Normal	7.700	7mm	Yes	" "
	Normal	4.000	14mm	Yes	Fever for 8 days
	Normal	6.050	7mm	Yes	Uneventful recovery
Sub-Acute	Normal	9.250	29mm	Yes	11 days of fever
	Normal	9.600	26mm	Yes	Very Toxic
	Normal	5.100	33mm	Yes	16 days of fever
	Normal	9.350	27mm	Yes	Died—Peritonitis
Acute	Normal	26.250	32mm	No	Too acute for operation
	100.0	25.550	22mm	No	" " " "
	99.6	19.300	28mm	No	" " " "
	103.6	14.900	36mm	No	" " " "
	Normal	13.500	27mm	No	" " " "

riod of time previously needed. He plotted graphs for his various readings and showed that cells settle out according to either (a) vertical, (b) diagonal, or (c) horizontal curves, and that the type of curve could be determined quite

He used 3 per cent sodium citrate as an anticoagulant, and used approximately 5 c.c. of blood. Blood was placed in the tubes up to the zero mark. The tubes were then tightly stoppered and inverted twice and set in racks at room temperature.



Readings were taken at intervals of five minutes for an hour and charts were made of these readings.

Many theories have been advanced as to the phenomena of this test and the various factors having to do with its occurrence. It is not within the scope of this paper to discuss the reasons for the sedimentation of the erythrocytes but rather to determine, if possible, the relationship between the rate of sedimentation and the clinical picture. To this end tests were run routinely on all gynecological patients at Bell Memorial Hospital of the University of Kansas for a period of approximately six months.

The method used here is approximately the same as that of Cutler. Exactly the same charts are used and approximately the same type of tubes. However, 5 per cent sodium citrate is used as an anticoagulant and it is first placed in the sedimentation tube rather than in the syringe. Each tube has a mark near the bottom, to the level of which the necessary amount of citrate is placed and the tube is then filled with blood to the zero mark. The tubes are then inverted twice, placed in a testing rack, and allowed to stand at room temperature.

In the following discussion exactly one hundred tests on ninety-two different patients are analyzed. These tests include both acute and chronic infections, myomata and carcinomata of the pelvic organs, pregnancy, and a larger class of miscellaneous diseases.

#### DISCUSSION

Figure I represents the tubes used and a specimen reading at the end of one hour.

Table I divides the 100 cases into groups according to disease. Eighteen cases of chronic endocervicitis showed a range of 6 to 18 mm. and an average of 12 mm., twenty-seven cases of miscellaneous diseases averaged 12 mm. Myomata of the uterus show a slightly faster sedimentation rate with an average of 17 mm. while carcinomata of the cervix show still greater increase with an average of 23 mm. This is perhaps due to (a) anemia, and (b) secondary infection

which is so frequently present in moderately advanced carcinomata.

In this series the only cases of pregnancy were eclamptics or other abnormalities and the five cases showed an average of 23 mm. Fahraeus<sup>1</sup> has shown that the sedimentation rate is much faster in pregnant individuals than in the non-pregnant.

In all kinds of acute infections such as breast abscesses, pelvic cellulitis, and tubo-ovarian abscesses, the sedimentation rate is greatly accelerated, eight cases showing an average of 29 mm.

Table II shows a group of 14 cases sent into the hospital with a diagnosis of chronic salpingitis. Five cases had a marked leukocytosis, a more rapid sedimentation time (29 mm.), and three of the five had a slightly elevated temperature. They were considered too acute for operation. Five cases had normal temperature, a leukocyte count below 10,000 and an average sedimentation time of 9 mm. These cases came to operation and, with one exception, had an uneventful recovery.

The third group of four cases, with ordinary means of diagnosis, were ready for operation. The temperature was normal, the leukocyte count was below 10,000 but each case had a rapid sedimentation time (average of 29 mm.) Following operation, each one ran a stormy course with one death. Had the sedimentation test been used as an index, these cases would not have come to operation for some little time.

This is not a conclusive study—rather a preliminary report—but, from our observations, we conclude that the test is valuable in those border line cases of salpingitis where other routine laboratory tests do not suffice. More definite and positive conclusions may be drawn when a much larger series of cases have been observed.

#### CASE HISTORIES

Case No. 1. White female, age 24 years, entered hospital on December 13, 1929, with chief complaint of pain in right lower abdomen. Physical examination was negative except for pelvis. Both tubes were tender, white blood count was 9,250. 1+ albumin in urine. Sedi-

mentation test was 29 mm. in one hour. Blood pressure, 130/90. Temperature was normal. Patient operated on December 18. Temperature varied from 99° to 101° for ten postoperative days. Dismissed January 5 as cured.

Case No. 2. Colored female, age 32 years, entered hospital on January 21, 1930, with chief complaint of pain in lower abdomen, backache, and vaginal bleeding. Masses in each adnexa. White blood count was 9,600. Temperature normal, sedimentation rate 26 mm. on four occasions. Patient operated upon February 8, temperature was elevated for eleven days. Dismissed on February 19.

Case No. 3. Colored female, age 46 years, entered hospital March 22, 1930, with chief complaint of pain in both lower quadrants. Examination showed mass in each adnexa with possibility of fibroid. White blood count 5,100. Wassermann and Kahn tests were 4+. Temperature was normal. Sedimentation rate 33 mm. Blood pressure 135/90. Patient was operated on March 26, bilateral salpingectomy done. Patient ran a marked elevation of temperature for fourteen days and was quite ill. Dismissed as improved.

Case No. IV. Colored female, age 38 years. Entered hospital on October 27, 1929, with chief complaint of pain in both lower quadrants and unable to work. Examination revealed a mass in pelvis on the right side with some thickening of both tubes. White blood count was 9,350; red blood count 2,640,000. Blood pressure 120/80. Sedimentation rate 26 and 29 mm. Temperature was normal. Operated on November 1. Excision of cyst and bilateral salpingectomy done. Temperature went to 104° the next day and patient died on third postoperative day. Autopsy revealed acute generalized peritonitis (colon bacillus).

#### DICTUM

Do not operate upon a case of salpingitis until:

1. Temperature is normal for two weeks.
2. Leucocytes are under 10,000.
3. *Blood sedimentation in one hour is less than 20 mm.*

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#### R

### The Surgical Female Abdomen

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Read before the annual meeting of the Kansas Medical Society at Topeka, Kan., May 7, 8 and 9, 1930.

A surgical abdomen is one wherein nothing will serve as a corrective measure quite so well as will surgery, and even this is subject to modifications. Surgery should in no case be considered advisable except where, beyond any reasonable doubt, surgery promises to reduce to a minimum possibility the amount of existing discomfort, to produce a greater physical efficiency, to increase rather than decrease functional activity and to incur to the patient a lesser risk of disability or of life than does the withholding of such surgery. Nothing short of this meets the obligation the surgeon owes to his patient. Surgery in its full sense is like unto the burning bush, surrounded by sacred ground, one should approach it with reverence and with feet bared by hard work, long study and adequate preparation.

The female abdomen is subject to practically all of the physical embarrassments to which the male abdomen is liable. Gallbladder disease more often, stomach disease less often and intestinal conditions are more frequent in the male than in the female, this pertaining to surgical conditions, either acute or chronic. The spleen is more often found calling for surgery in the female than in the male. Little time should be taken to enumerate those conditions which are common to both the male and the female



abdomen and I merely mention them to call to your attention the fact that any of them might easily and often do add to the burden found only in the female abdomen.

The uterus, the ovaries, the tubes, the broad and the round ligaments are the structures most often involved in the surgery of the female abdomen. In dealing with the uterus we have many conditions coming to our attention. First I shall mention misplacements. Retroversions and flexions, anteversions and flexions and in these, surgery is not often called for as a necessity. It is difficult for me to see where a uterus in a posterior position, unless very definitely adhered to surrounding structures, can be the cause of any very great distress. If it is not adherent it is frequently movable and I have never seen a freely movable uterus give rise to very aggravating symptoms. Occasionally one sees a uterus which becomes incarcerated in the hollow of the sacrum, and due to congestion or to interference with the circulation or early pregnancy, enlarge and become an acutely surgical condition. Ante flexion and anteversion are of little consequence unless adherent to bladder or other neighboring structures and are mentioned to let you know they have been thought of. Adhesions of the uterus following acute inflammatory conditions such as uterine peritonitis where an exudate was responsible for adhesions to intestine, omentum or other intra-abdominal structures, sometimes become very demanding situations. I recall one case of acute intestinal obstruction where a band of adventitious tissue attached itself to the ileum. This tissue had its origin at the fundus of the uterus, and extended out and completely surrounded the two segments of a loop of the bowel, resulting in a complete intestinal obstruction and the operative procedure consisted of simply dividing the band which permitted the loop of bowel to unfold and the patient was relieved. Adhesions of the uterus to other structures do sometimes bring about demand for surgery. Uterine fibroids, whether of one type or another, intramural, submucous, subserous or otherwise, in my opinion

call for surgery. I have seen many of these cases subjected to x-ray and radium and I have lived long enough to see several of them re-enter the arena of trouble and surgery is not so easily performed nor is the risk lessened on these cases which have been subjected to irradiation. So, in a large number of these cases the condition recurs and in my opinion surgery is the choice method of procedure, and the earlier the better. I do not know of any method of finding a dividing line between those fibroids which will respond permanently to irradiation and those which will not. Surgery is simple, surgery is effective. When it is done by a competent surgeon, results should be very gratifying.

Prolapse of the uterus is a condition which presents many surgical problems. In practically all cases of prolapse where the perineum has been destroyed, one must resort to surgery to make a correction, and in many of these cases some form of interposition operation. Wertheim, Watkins, Dührssen, Schauta have all described such an operation, and by combining the good points of the different techniques, one may arrive at a procedure which will apply to most any case. The perineum must always be cared for in this operation. In prolapse, where the perineum is not at fault, or is not a factor, there are several operations which will suffice to correct the condition. I more often use the technique described as the Baldi-Webster as it has given me better results than any other but it does not apply to all cases. Prolapse of the uterus, if severe enough to produce symptoms of which the patient is conscious, should be corrected.

Infections of the uterus occasionally call for surgery. The usual indication for an infected uterus is rest, observation, absolute quiet, etc., but occasionally where the source of an infection is known, its character, virulence, etc., lives have been saved by an early hysterectomy. Infections resulting from introduction into the uterus of foreign bodies, trauma, accidental injuries, etc., occasionally produce a very active infection. This may result in a localized peritonitis, a peri-uterine peritonitis, and a vaginal

examination will reveal to the experienced finger not necessarily a bulging of the culdesac but a tenderness accompanied by a peculiar spongy feeling, hard to describe, which calls for opening the pelvis through the vaginal route, and a gauze pack, this often limiting the infection to the pelvis. Ruptures and perforations, polyps with hemorrhage, hydatiform mole with its frequent sequella of chorionic epithelioma, all of these necessitate immediate surgical activity.

Malignancies of the fundus of the uterus should be dealt with promptly, boldly, radically, and with a thoroughness bordering on the verge of foolishness. If one leaves any small portion of a malignant structure, whether it be the primary seat of trouble or whether it be a neighboring victim of a metastatic process, time will exact its toll. In all malignancies one should go the limit in surgery. The work should preferably be done with heat in some form as the cautery or radio knife, that the tendency to metastatic processes might be eliminated so far as possible. In malignancies of the cervix, unless they are recognized before they can be recognized, it is my opinion that surgery has no place. The tendency to metastasis is so great that the usual end result of surgery is to add to the burden and surgery here does not fulfill the requirements mentioned in the beginning of this paper.

The fallopian tubes are the happy hunting ground for both the gynecologist and the surgeon. Usually the surgeon is the last to see cases of salpingitis, except the acute conditions, resembling appendicitis or other acute abdominal conditions. Most of these cases have been the rounds, seeking a way out. They have consulted the family physician, the osteopath, the chiropractor, in fact any one who will promise less than surgery. Many of them have unfortunately delayed until ravaging conditions have, through a spread by continuity of tissue, involved neighboring structures. There is no condition to which the female abdomen is subject wherein surgery is more essential than in salpingitis. It is the cause of more distress, more suffer-

ing, more ravaging destruction to surrounding tissues than any other condition. By this, I do not mean alone a gonorrheal infection of the tubes. We find many who blame all salpingitis on the gonococci. This is not the case. Gonorrhea causes a small percentage of the salpingitis of today. Erroneous ideas that ninety per cent of all men have or have had gonorrhea are largely responsible for such poor opinions as that gonorrhea is the offending factor in practically all salpingitis. Fact is that only a small per cent of all men have experienced gonorrhea. I had the experience of a medical practice, specializing in surgery and gynecology in Amarillo, Texas, before, after and during the oil boom, which lasted for better than three years. Prostitutes belonging to the professional and to the leisure class inhabited that city. Libertines and whoremongers, pimps and perverts thronged the streets, rooming houses and hotels. All the new cases of gonorrhea I saw during that time were cases which, in my opinion, ran true to form in gonorrheal infection. If the infection ascended to the uterus and tubes it was a very unfortunate affair which totally disabled the patient for a period of several weeks.

The symptoms were acute, and one man with an old and incurable gonorrhea infected three women. All had acute symptoms demanding complete rest in bed, exhibition of temperature, pain in abdomen, with rigidity over the entire lower abdomen, painful and frequent urination, acute congestion with swelling of the external genitals, and other classical symptoms of an acute and ascending infection which is never easily placed under control. Two of these women demanded surgery following the subsidence of the acute symptoms.

There are men who will argue that nearly all gonococcic infections are self limited, that the condition will largely correct itself if the patient is put to bed, and that tubes which have closed to protect the peritoneal cavity will become patulous again after the salpingitis has subsided, and that pregnancy might thereafter occur. This is seldom, if ever, accomplished for the very reason that



the tube is tightly sealed and no escape of this pus is possible except through either the distal or proximal end, this taking place early in the process, and when escaping through the distal end, there is usually found a well defined abscess. While it is true that the peritoneum is not easily affected by the gonococcus, it is also true that the opening of the abdomen of a patient known to have previously suffered from a severe gonorrheal salpingitis has, so far as my experience goes, always disclosed tubes permanently closed, especially at the distal end and these tubes more or less distended with pus. I do not believe that any patient who has ever had a severe bilateral salpingitis due to gonococci, and I think they are all severe at some time, will ever become pregnant. I think we find gonorrheal endometritis causing pain which simulates salpingitis, and which is aggravated by the menstrual flow and the congestion incident to it, and this is often diagnosed salpingitis. These patients, later becoming pregnant, are considered to have overcome a condition which has been diagnosed as salpingitis. We usually designated these large and much distended tubes due to gonococcal infection as tubes of the city type and all ran true to form. I think that the staphylococcus, in fact any pyogenic organism which is known to flourish on mucous membrane, is more often responsible for the insidious form of salpingitis than is the gonococcus. I think that every case of salpingitis due to pyogenic organisms wherein a tube is enlarged to the extent that it can be diagnosed by the sense of touch of the examining finger is a surgical condition. I do not believe that all the vaginal packs, tampons, suppositories, douches or other palliative measures given in all times past ever cured or permanently benefited one case. I do not believe any electrician, physiotherapist or plumber ever did one of these cases any good.

Ectopic pregnancy certainly has a place in this paper. I regret very much that I do not have sufficient time to pay due respect to this very important condition. All tubal pregnancies, in fact all

ectopic pregnancies are surgical conditions as soon as recognized. It makes no difference whether the diagnosis is made before or after the rupture has taken place, although we must admit most of the time the rupture is the means of bringing the patient to the physician. So soon as the diagnosis is made the case is at once surgical. Surgical thought, surgical judgment, is called for as there is no disputing the statement that some cases are in such profound shock that immediate operation is not advisable, however, the general rule would be to operate as soon as shock is overcome. There is no doubt in my mind that many cases of ectopic pregnancy are never diagnosed. They rupture early, very little inconvenience is dealt the patient and she never sees a physician. Bleeding is not of great consequence in quantity and the product of conception being liberated by rupture, its progress is stopped, it is absorbed or becomes organized and no further trouble is experienced. Unless these cases then are sufficiently well developed at time of rupture, or unless they cause considerable hemorrhage, it is possible they may go unseen. Those classical cases of sudden pain in the abdomen, accompanied by severe shock, collapse, with frequently a small amount of uterine bleeding should offer no problem as to diagnosis. There are several types of ectopic pregnancy. The first memoir of note written on this subject was written by William Campbell of Edinburgh in 1842. He compiled all the earliest records. John S. Parry of Philadelphia in 1876 published a monograph on this subject describing early rupture with a remarkable degree of accuracy. He collected reports of 500 cases. The first operation for ruptured tubal pregnancy was performed by Tait in 1883. Ectopic pregnancy may take place in the tube, or rather may remain in the tube, we may have them in any portion of the tube about 76 per cent taking place in the fimbriated extremity, 21 per cent in the isthmic portion with 3 per cent in the interstitial portion. Ovarian pregnancy, true ovarian pregnancy is very unusual. De Lee up to 1928 had collected 85 cases reported to that time. It has

been my experience to have had what I think is an unusual number of ectopic pregnancies. Among such cases as I have had I have had one case of true ovarian pregnancy, the specimen having been examined by the pathologist of Terrill's Laboratory in Fort Worth, Texas, and I have his report on that case, I have had two cases of abdominal pregnancy, where the tubes and ovaries were intact, and both of these came to rupture. Those cases coming under my personal observation ruptured near the sixth week, a history of a period having been missed two weeks before.

Next comes the consideration of the ovaries. When are the ovaries surgical material? Sometimes one is led to think the ovaries are never surgical. We all have a right to our opinion? In giving mine, I should say that the best policy in dealing with the ovaries is that of hands off. I do not open cysts of the ovary in the course of an abdominal operation unless they have attained considerable size. I think that in puncturing them, they soon refill and in doing so they might not know when to stop. No good is accomplished by so doing and why do it. If these simple cysts of the ovary are very large they should be opened, drained, the cyst wall excised and the wound in the ovary covered by suture in such a way as to leave no cyst wall, thus reducing the possibility of a recurrence. Fibrous growths on the ovary, pedunculated tumors, should be removed and raw surfaces covered. In so called cystic degeneration of the ovary, the ovary should be removed. We often see ovaries three or four times the normal size, where it is difficult to see or at least recognize macroscopically any ovarian tissue. This ovary has long ago ceased to function and should be removed. Summing the whole matter up, one should exert every effort to retain as much healthy functioning part of an ovary as possible. Ovaries are the most important structure in the female abdomen from the patient's point of view at least, and one should always report to the patient that you found her ovaries in excellent condition if it is at all possible to do so. Leave good healthy ovaries in

the abdomen and then tell the patient they are bad and see how much you have done to cause the patient to complain continuously about her ovaries. Women worry more about their ovaries than they do about their dresses or any other important item in their makeup.

Cesarean section is of course a surgical procedure. It is indicated, in my opinion, in most cases where its possibilities have not been stolen. It is certainly preferable to high forceps. It is an operation based on modern, scientific surgical principles. When properly performed, under the observance of the usual surgical precautions, mortality to the mother should not exceed that of high forceps, and the risk to the child is certainly greatly reduced. The questions of sepsis, method of procedure, previous treatment of the patient, kind of anesthesia all have their considerations, depending upon the general findings in the patient. Sepsis has been overstressed, if such is possible, for I do not believe there is the great danger from previous vaginal examinations today that there was several years ago. In the first place, more physicians are careful about making examinations than was formerly the case. Diagnosis of position is more often made, rectal and external examinations are more depended upon, and hospitalization is certainly much more frequent than it formerly was. This all tends to lessen the difficulties we have to meet. The rupture of the membranes, an engaged child, do not preclude the possibilities of a cesarean section. There are three principal methods of procedure. The first is the classical operation, in which one may either deliver the uterus through the abdominal incision or pack it off from the rest of the abdominal cavity. I prefer to deliver it. There is the low operation, extra-peritoneal when properly accomplished, and there is the two stage operation. If there has been previous attempts at delivery through the birth tract, one should pack the vagina with 5 per cent mercurochrome or S. T. 37, several hours before operation. The uterus should be delivered and packed off well from the peritoneal cavity, painted with mercurochromé.



or some similar non-irritating solution and the delivery accomplished. Time does not permit too much elaboration.

The scar in the uterus has been much talked about as a danger of future site of rupture in following pregnancy. I have had several cases who had been previously operated on by cesarean section and have not been able to find any weakness in the uterine wall from this cause, in fact I do not think this is nearly so much a danger as it has been pictured to be. Every case must of course pursue the cardinal rules of any surgical operation. Each case must be individualized and a rational program outlined for each case. One cannot group surgical procedure.

This paper has not been an attempt to bring anything ultra-scientific, neither has any attempt been made to bring anything radically new to you. It is more an expression of the thought and experience of the writer, practical, I hope, and perhaps worth some discussion. If so, I shall think that I have not entirely failed in presenting it to you.

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R

### Refraction

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Read before the Montgomery County Medical Society,  
January 16.

Because of the very large number of people who are made more comfortable and more efficient by being fitted with glasses, and because very much poor refraction is being done, I feel justified in bringing this subject before this society.

The training of persons licensed to do refraction in this state is a variable quantity. We have the eye physician who finds himself burdened with the problems of eye diseases and who looks upon the matter of refraction as a minor affair and treats it accordingly, and the optometrist who knows very little of the problems of the eye physician, but is concerned with pure optics, and from a theoretical standpoint may be fairly well trained, but from the standpoint of physiological optics he is untrained and quite helpless in a vast number of cases, as I shall try to point out.

In talking with eye physicians I find that there are many and varied ideas as

to the methods of handling a refraction case, which may be interpreted to mean that their training has been defective, or that they have not taken the matter seriously. It is estimated that refraction constitutes about 75 per cent of the work of the eye physician.

Owing to the fact that a considerable amount of fairly good results can be had with the systematic use of the trial lenses, which is especially true after the patient has passed middle life, or reached the presbyopic age, a goodly amount of success is due to fall both to the eye physician and the optometrist alike. A much larger field can be covered, I am thinking now of young adults, by the use of a cycloplegic (atropine or homatropine) and the use of the trial lenses. It is necessary to include much time and patience and possibly a post cycloplegic test. There still remains a considerable and important field for the refractionist; namely, the child both of pre-school and school age. The child of school age, who is frowning and tearing, is slow to learn and having difficulty to see the work put on the blackboard, is being picked up either by the school nurse or the teacher and recommended to the eye physician. But the pre-school child that is squinting, the cross-eyed child, is too often allowed to go unadvised by the family physician. Here the eye physician, with the methods at his command, has a field set apart for him, with the use of the cycloplegic and the retinoscope, and I wish to say in passing that the retinoscope is the most reliable and practical instrument for determining the total amount of error of refraction at the command of the refractionist. The eyes of the infant will wander about until the mother may ask if the baby is cross-eyed. Later, when the child begins to fixate bright objects and is attracted to its play things at close range, the eyes both fix the same object and what we call fusion or binocular vision takes place. If the child is too hyperopic, squint or crossing of the visual lines takes place. Marked hyperopia makes an inequality between accommodation and convergence. And squint comes on at from two and one-half to five

years of age. The eye physician, by means of a cycloplegic and his retinoscope, can determine the amount of hyperopia and correct it, allowing the eyes to become straight. Give the child, whose eyes have a tendency to cross, to the eye physician sufficiently early in life and he will in many cases enable the eyes, by means of lenses, to cease deviating and develop fusion.

I have spoken of retinoscopy and the use of the cycloplegic. I am aware that there is a method of use of the retinoscope without a cycloplegic, known as cyclo-damia. I have not used it, so cannot recommend or condemn it. Will only say that I can see how it would be valuable as a time saver to the busy refractonist. I am persuaded that the average eye physician should use the cycloplegic in all children and young adults and occasionally in persons of the presbyopic age. It is time consuming, yes, but what right have we as physicians to claim any superiority over the optometrists, if we use the same methods that he does, and perchance, no more skillfully.

As to the safety of the cycloplegic, Edward Jackson, in summing up a paper on the results of the use of a cycloplegic in some 2,000 cases, stated: "Where any apparent harm had resulted, the eye disease had existed previously." Then there is the fear that one might provoke an attack of glaucoma in a person past middle life by the use of a cycloplegic. Duane says: "An eye which develops glaucoma under a cycloplegic is going to develop glaucoma anyhow. It is not an unmixed evil to have it develop under our eyes."

It is quite necessary that the refractonist be familiar with the signs and symptoms of glaucoma. This is especially true of non-inflammatory glaucoma. Even the specialist must be on his guard that he does not overlook the incipient cases. He should encounter no difficulty if his examinations are thorough. He should even find and remedy many pre-glaucomatous conditions. This is a day of preventive medicine.

A friend of mine, who had studied optometry in an optometry school, found

that his mother was not only requiring frequent fitting of glasses, but did not get along well at best. He took her to an eye physician who found that she was suffering from diabetic retinitis. Under proper diet she regained somewhat her health as well as her vision.

An acquaintance of mine, a young man, college graduate, had obtained the principalship of a high school, found that he was not seeing well. He consulted an optometrist of good reputation who fitted him some glasses, which upon trial did not seem to help any. He again consulted the optometrist who told him he would have to get used to the glasses, which he did not seem able to do. He later consulted an eye physician who found that he suffered from albuminuric retinitis. He later died as a result of his nephritis.

The physician who lives remote from an eye physician should learn to do refraction. Expensive and showy equipment is not necessary. He should learn the use of the ophthalmoscope and the retinoscope. The ophthalmometer is an aid in arriving at the kind of astigmatism, but not a necessity. Jackson's cross cylinders are a very great aid in arriving at the proper axis of the cylinder. And like the artist who mixed his pigment with brains, he will arrive at the proper solution of refractive problems.

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### State Medicine

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Read before the Montgomery County Medical Society, Caney, Kansas, September 19, 1930.

By state medicine we mean that the cost of medical and surgical services to the public will be under state control by special taxation. It in all probability will be maintained conjointly by the state and national government.

We are aware that time brings about many changes. The economic conditions in America are today such that socialistic tendencies are easy to foster. The easy mode of travel with the advent of the airplane has practically brought the large clinical centers within easy reach of everyone. We no longer see the rural practitioner in a town of 300 or 400 peo-



ple. Progressive medicine is hard to maintain in cities below 15,000. The family today has two or three physicians with no personal touch with any of them. The physician instead of being an adviser and confident has become merely a public servant with mass production a salient factor.

Medical education in America has been increasing every year till today the cost of receiving a medical education is approximately \$8,000. We have 66 class A Medical Colleges in America who graduated 6,658 students in 1929. In 1922 there were 2,486 students graduated showing a great increase of graduates in spite of higher requirements and fewer schools. United States today has 127 physicians per 100,000 population. Our nearest rival being Switzerland with 80. England, France and Germany are closely grouped with about 65 per 100,000 people.

The cost of hospitalization has kept step with the cost of medical education till today it is nearly impossible for the wage earner to receive the best of medical care. He must be content with objective medicine without any special laboratory work or hospital care. But will he? The idea of democracy has been sown so freely in America that the average individual demands the same standard for his family that the rich can afford. He is progressive and ambitious and wants to give his family equal opportunities with his rich neighbor. But to do this he must economize on some item. Hence, any help that will come to him from the state will be appreciated, as this will enable him to give his children a better education.

The physician has always been pictured as a prosperous individual with more money than he needs. The public thinks he has a very easy life and charges too much for his services, little knowing that the average income of all physicians in America is about \$5,600 and this has been decreasing yearly.

The great influx of foreign population in America with the number of unprotected youths who were victims of preventable diseases fostered the idea of public health. From this came the free

dispensary and charity hospitals, state boards of health and county physicians and nurses. It was fostered to protect the healthy individual from contamination from those who do not care and who could not afford to pay for services of a private physician. This idea is like the free lunch with beer, the more lunch served the more people wanted till today immunization in the larger centers is almost entirely in the hands of cities and states with increasing demands for more services. Industrial, compensation and compulsory insurance has helped foster the idea of free services.

We have only to go across the Atlantic to see the fate of the physicians in Europe who are now controlled by the government.

England has perhaps the best system, which grew out of contract practice in large companies and private clubs. The National Insurance Act has provided for a number of physicians who must register with the Central Committee and be accepted. They are allowed to treat the people in their community who belong to the insurance group. Each physician is allowed 2,500 members and required to see at least 50 a day. A member can change physicians and file a complaint with the ministry against the physician at will. The remuneration is about one shilling a visit. A physician must keep and file a complete record of all cases, no matter how trivial. If the number of visits are excessive his bill is checked by a physician employed by the National Insurance Company.

Specialists are provided for, and also hospitalization by the insurance account, but all hospital cases must be approved before being accepted. A physician is not required to belong to the groups but it is very difficult for one to make a living if he does not belong.

Germany has had compulsory sick insurance for over fifty years. It has been extended and now provides for all services rendered if approved by the Central Committee. Thirty-five per cent of the unemployed and eighty per cent of the employed belong to the insurance group.

No doctor teaching in a university or receiving 500 marks a month can belong

to the insurance group, and all applicants must be approved before being accepted. The insurance groups are all controlled by the government.

France has had a modified sick and health act a number of years but beginning in 1930 it was compulsory for every one to belong to the insurance group. Denmark, Austria and Switzerland all have national insurance acts, Austria and Switzerland being compulsory.

Has this helped the physician or individual?

In Great Britain physicians favor the insurance act for their income is higher and they see many more cases than previously. A number of diseases are seen early because the patient must report for examination.

Germany has not fared so well and there is a great deal of unrest today among the physicians. There are no provisions made for training of young clinicians for research, so that the progress of medicine has suffered. The medical profession is not protected and quacking has flourished. Between one-fourth and one-half of the people are treated by irregulars or quacks. The insurance groups are constantly increasing the work of their physicians and checking their visits for irregularities. If proper legislation is not enacted soon, medicine in Germany will be on a low scale.

It has often been stated that such a plan could never be enacted or permitted in America. The thinking American people would never permit it. I do not agree with them. We have only to come back to our own state and community for an example of the trend.

The state last fall provided for full time health physicians in counties that wanted to adopt it, the expense to be shared by the county and state.

Judge Doyle one of the former justices of the Supreme Court, who is now one of the judges of the Industrial Commission, favors state insurance and is going to introduce a bill this fall favoring state insurance for compensable cases. This of course if passed will soon be expanded and will cover both sick and accident cases.

Morningside Hospital in Tulsa has an

insurance plan today which gives its members hospitalization. The insurance company picks its own panel.

Now let us take our city, Bartlesville has two oil companies who have physicians. The Phillips employs 700 people and gives services to all those that seek it. These are the wage earners of the family. Indian Territory employs about 400 here and has about 400 welfare members that receive medical and surgical services. It is not uncommon for one of these physicians to see 75 people in one day for various minor ailments. The Security Benefit has 700 members in Bartlesville, who are entitled to free hospital and medical services. Indirectly this covers about twenty-five per cent of the city's population, if the families of these wage earners are counted.

Within the next few years you will see insurance groups for the protection of their members. Legislation will follow and soon you will be working for some insurance group controlled by state legislation.

It does seem strange that medicine, which has struggled through so many hardships and reached a place where the various specialists are able to render better services to mankind, must be sacrificed to commercial socialistic tendencies where the individuality of the practitioner, which makes him stand out among his competitors, is lost. That medicine will suffer is not the only factor but research and individuality will be destroyed. America's position today in medicine and surgery can only be attributed to the free pursuits of certain individuals who possessed creative and constructive minds.

For organized medicine to try and prevent the state control of medicine is like the protest of musicians against reproduced music. We must accept this step whether it be considered progress or not, because public sentiment will demand it. The change will be slow and our liberties gradually curtailed till we will have the same laws as any panel physician.

My only hope is that the most of my years will be passed before the time comes when the few free hours we have now will be spent compiling records.



## A Case of Lipodystrophia Progressiva

WILLIAM H. ALGIE

Halstead Hospital, Halstead, Kansas

The patient, a girl aged 7 years, was brought to the clinic of the Halstead Hospital April 17, 1929, because of failure to gain weight during the previous year.

**Family History**—The family history was negative. The patient was the oldest of four children; the other three were well.

**History**—The child had been well until she had measles one year prior. Shortly

after the mother noticed thinness of the face, a condition which during the next six months involved the neck, thorax, arms and upper abdomen. There had been no change in her appearance during the half year previous to the visit to the hospital. At the time of examination she weighed 38½ pounds, 2 pounds less than she had weighed in the spring of 1928. Her appetite was somewhat capricious and she was often restless at night. There were no other symptoms.

**EXAMINATION**—Her appearance was striking, the thin wasted face with deep set eyes, prominent cheek bones, sunken temples and hollow cheeks made her appear much older. The apparent absence of subcutaneous fat over the face, neck, thorax, arms and upper abdomen contrasted sharply with the normally plump hips, thighs and legs. The skin over the wasted areas was normal in appearance, soft, elastic and easily lifted from the underlying muscles. The latter were plainly outlined when in action. The muscles were strong and seemed normally developed. The lower ribs flared slightly and there was moderate beading along the costo-cartilaginous junctions. The remainder of the physical examination and the neurological examination revealed nothing remarkable.

**Laboratory Report**—The urine was normal. The blood count was normal and blood cells appeared normal. Roentgen examination of the chest showed moderate increase in density of hili shadows. Blood Wassermann reaction of the mother's blood was negative.

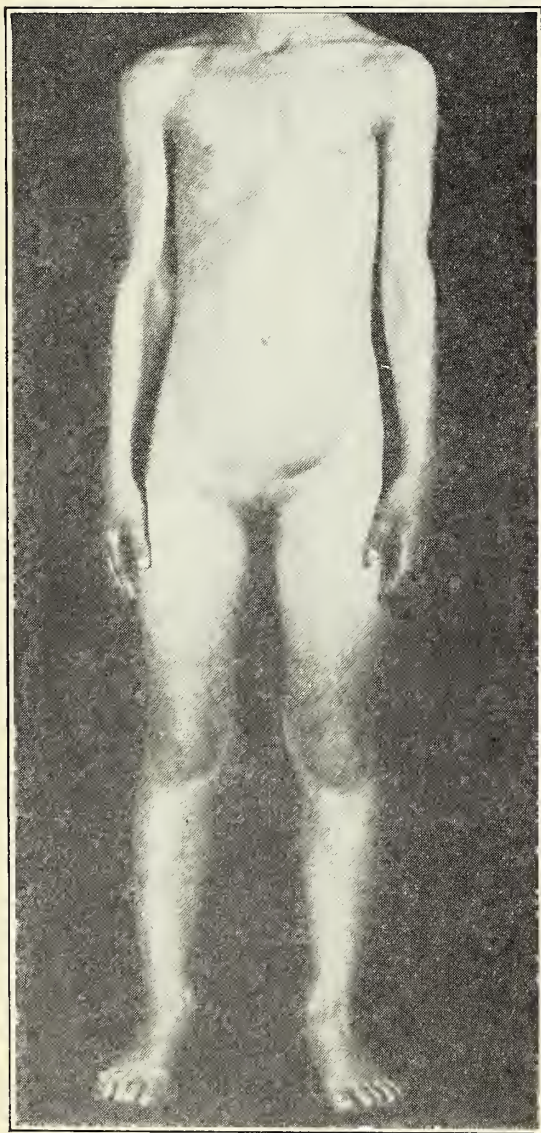
The child was seen subsequently May 11, 1930. She had gained in weight to 42½ pounds. There was no change in her general condition or appearance.

### COMMENT

This case presents all the typical features of lipodystrophia progressiva with the exception of an increased fat deposit in the buttocks and lower extremities which according to Smith and others is not usually noted until some years after the onset of facial wasting.

### REFERENCE

Smith, H. L., *Lipodystrophia Progressiva*, Bulletin of the Johns Hopkins Hospital, Vol. 32, pp. 344-350, 1921.



Front view of patient, aged 8, showing wasted appearance upper portion of body.

**Supernumerary Breasts. Report of Case**

R. C. HARNER, M.D., Howard

Mrs. V. M. C., a primipara, aged 21, was confined December 12, 1930. Saw her again the third day, when supernumerary breasts were first observed. These are situated, one on either side, over the pectoralis major muscle close to the anterior axillary line. Her normal breasts are large, well developed and having well formed nipples. Nipples of the extra breasts are flat or inverted. Milk is abundant in her normal breasts, and enough in the supernumeraries to run down on her clothing if pressure is made. In size these are each as large as half of a large orange.

The patient is a well nourished young woman, weighing one hundred and forty pounds, and of Norwegian parentage. She says she has no knowledge of any thing like this in her ancestors.

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**Ruptured Ectopic Pregnancy With Auto-transfusion—Report of a Case**

CHARLES J. MCGEE, M.D., Leavenworth

\*SHERMAN L. AXFORD, M.D., Lansing

Patient Miss A. K., aged 23, was received at the Industrial Farm for Women, May 14, for treatment of gonorrhea. She is a well nourished girl, 64 inches in height, weighing 120 pounds. Other than gonorrhea her history is negative. Her menstruation has always been regular, 28 day type, duration four days, moderately free, no pain or clots. The last period was scant, lasting about one and one-half days, the exact date of which she is unable to give. Today she was seized by a sudden sharp stabbing pain in her lower abdomen. The pain was so severe that she had to lie down on the floor. She began to perspire freely, felt very weak and noticed that she was flowing. When seen she presented the symptoms of severe shock. Her abdomen was tender, somewhat distended and she was suffering a great deal of pain, begging that something be done for her. Vaginal examination showed a bloody discharge, that the uterus had been pushed to the left with a tense boggy mass in the culdesac. Relatives were informed of the gravity of

the situation and operation was decided upon as it was evident that she was bleeding internally.

Under light ether anesthesia a four-inch median incision was made in the lower abdomen. When the peritoneum was exposed it was noted that the abdomen was filled with blood. It was found that the right tube had ruptured and was still bleeding. Bleeding was quickly controlled by a clamp. Blood and clots were rapidly removed, filtered through several layers of gauze, which had been previously saturated with citrate solution, into flasks containing 2 per cent sodium citrate solution. The flasks were kept warm and slightly agitated in order to favor the more rapid mixture of blood and citrate. Serum was expressed from the blood clots and filtered.

One of us (M) completed the operation while the other (A) started the transfusion as soon as a small quantity of blood was citrated. The patient reacted at once. Pulse rate and volume improved and there was a rapid improvement in her color. 1000cc of salt solution was placed in the abdomen and the wound closed. Patient made an uneventful recovery and was able to leave the hospital ward in two weeks.

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**Research Hospital Staff Meeting  
September 11, 1930**

ROBERT MCE. SCHAUFFLER, M.D., Kansas City, Mo.

The first case discussed was that of a man 61 years old who sustained a spontaneous fracture of the femur from a slight misstep when going into his bathroom. The fracture was treated by ice tong traction in a splint.

The pupils did not react, the knee jerk on the uninjured leg was absent, the Wassermann negative.

The fracture was easily controlled and showed abundant callus at five weeks.

The patient died of bronchopneumonia six weeks after admission.

Dr. H. O. Lienhardt reported that the patient had undoubted tabes and considered the fracture pathological. The chairman said that Charcot joints were

\*Since deceased.



well recognized, but that fractures in the shaft of bones from tabes were little known. The discussion brought out that some members of the staff had seen several such fractures and that they were due to brittleness or weakness of the bony structure and not to local syphilitic disease.

The major pathological-clinical problem at the meeting was Toxic Thyroid with Thyroid Heart and with Diabetes.

From the casualties of recent months three cases were presented. The first, a patient of Dr. A. Sophian, a woman 57 years old. She had had exophthalmic goitre more than eight years. Seven years before Dr. Crile had ligated thyroid vessel. Three months before admission to the hospital the patient had developed a chest cold with some fever. She could not throw this off and lost weight and strength, had some dyspnea, and at times fever. During the four weeks preceeding her death she had an irregular fever, usually not high, some ascites and edema, slight jaundice, occasionally delirious times. The autopsy diagnosis was exophthalmic goitre, chronic interstitial cardio-myopathy with decompensation, right auricular thrombosis, atrophic nephritis, moderate general arteriosclerosis. The sections of the thyroid showed apparent quiescence due to the ligations and iodine therapy.

The second was a man 67 years old, a patient of Drs. H. O. Lienhardt and D. R. Black. He had had an adenomatous goitre since adolescence with a history of several nervous breakdowns or upsets which probably were evidence of toxic phases of the goitre. He came to the hospital on account of circulatory decompensation. On admission his basal metabolic rate was 36 per cent increase; blood sugar 285. Electrocardiogram showed ventricular fibrillation and extrasystoles. Insulin reduced the blood sugar, but the patient died in a few days from circulatory failure. Autopsy report: hypertrophied nodular thyroid, chronic cardio-myopathy with focal myomalacia.

The third case, a patient of Drs. W. A. and B. L. Myers was a woman 67 years old. She had had a small nodular goitre for many years. It had appeared to be

quiescent. Her complaints were, rapid pulse, nervousness, weakness, loss of weight, and she had been confined to bed for some weeks. Diabetes had been noted for a year. On admission, basal metabolic rate was 26 per cent increase. The urine contained regularly albumin and casts, only rarely sugar. The blood sugar varied from 160 to 290, but seemed easily controlled by insulin. Electrocardiogram showed auricular fibrillation and extrasystoles.

The death seemed cardio-renal. The major autopsy diagnoses were foetal adenoma of thyroid. Chronic arteriosclerotic nephritis. Brown atrophy of the heart.

The specimens were shown by the pathological department. While there was the greatest difference in the gross appearance of these thyroids, the end result for the patients was the same and the heart changes which produced death were similar.

Discussion by Dr. Kerwin Kinard:

In my opinion many cases of toxic goitre are treated by their physicians for nervousness and heart disease without the goitre being recognized in its early stages as the etiological factor.

The first case presented had had ligations by Crile. Doubtless the other two cases had had surgery suggested and had refused it.

Dr. Lienhardt's case was the stubborn type of degenerated nodular goitre we so often find, who are afraid of having surgery. They make many excuses and alibis as to why surgery is not indicated in their particular case, and no one can induce them to accept surgery until they have used up all of their reserve strength. Then, when no experienced surgeon will operate them, they want an immediate thyroidectomy.

It should be emphasized that toxic goitre is a surgical condition and that early operation offers the only chance for forestalling serious cardiac changes.

As long ago as 1867 Pallier recorded the association of diabetes with exophthalmic goitre. In the last twenty years it has been pointed out by many authorities that this association is not infrequent. It has been shown by animal ex-

periments that prolonged feeding of thyroid extract produces glycosuria. Jocelyn says that the average life of a diabetic with primary hyperthyroidism is 3.4 years with secondary 5.5 years.

Dr. Kinard suggested diet and insulin as indicated, with the use of iodine followed soon by surgery. He said these cases should not be sugar free before operation as the anesthetic and the operation might induce hypoglycemia and that frequent postoperative determinations of blood sugar should be made especially in the first 24 hours.

Discussion by Dr. A. Sophian:

Considerable confusion exists as to the relationship of general endocrine disease and diabetes—a disease directly produced by lowered endocrine function of the pancreas, especially the Islands of Langerhans.

Rowe of Boston recently reported an exhaustive analysis of this subject, to-wit: 70 per cent of pituitary hyperfunction cases, 23 per cent of dysfunction showed glycosuria; 22 per cent of thyroid hyperfunction and 10 per cent of dysfunction showed glycosuria. Of the uncomplicated cases 17 per cent of all pituitary disease and 10 per cent of thyroid disease showed glycosuria. The blood sugar level, however, was only slightly increased in 3.9 per cent cases studied, which established that these blood sugar levels deny the existence of true diabetes in this large series of glycosurias.

It is evident that there is an obscure quantitative influence on sugar metabolism in thyroid and other endocrine disturbance, and that pituitary and supra-renal especially are antagonistic to insulin action, but this again is inconstant and often contradictory in its results.

While it is possible that insulin may be indirectly involved in the general glycosurias discussed, it is evident that it is far from being the decisive factor, and that true diabetes is not a common complication of thyroid disease—glycosuria is frequent but glycosuria does not mean diabetes.

Discussion by Dr. R. C. Davis:

It is rather interesting that in one staff discussion we have three cases of

thyrotoxicosis, dying as a result of the heart involvement.

In certain types of thyroid diseases it seems that the heart seems to bear the brunt of the thyroid disturbance, just as in certain other types the nervous system seems to have the most involvement. One frequently speaks of this type of goitre as the cardio-toxic, in which the circulatory system is the system which bears the brunt of the disturbance, or, the neuro-toxic type, in which the nervous system seems to be more affected.

It is rather interesting in that all of these patients show an auricular fibrillation, which is a manifestation of the degeneration of the conductive system of the heart. Unquestionably, if the condition had been recognized and the patient had consented to operation years ago, we would not have had this condition of heart failure.

When a case is sent to us for treatment for heart failure in which we find thyrotoxicosis, we should put the patient in bed and relieve the congestive failure by rest and, if there is fibrillation, by the use of digitalis. I use digitalis only if fibrillation is present. I do not use quinidine until after operation and in a considerable number it is not then necessary because after operation the heart has returned to normal rhythm.

There is much discussion in medical circles as to the use of iodine. Adolescent goitre is seldom toxic. In cases of definite thyrotoxicosis iodine should seldom be used except in preparation for operation. The immediate result may be to throw the patient into a remission, but all too often the operation is then postponed until the patient is a poor operative risk, or partial remission is prolonged while cardio-vascular changes continue to progress.

It seems evident to the reporter from the reports of these cases and the discussion, that many cases of toxic goitre seem to be arrested but that cardio-vascular changes progress quietly and are finally the cause of the patient's death. This would suggest that more and earlier operations are indicated. Further, that glycosuria and disturbed sugar tolerance



are common in thyroid disease and do not indicate diabetes, but that in a minority of cases true diabetes is co-existent.

The second pathological-clinical subject was Primary Carcinoma of Bronchi and Lung.

A case on the service of Drs. D. R. Black and J. G. Montgomery was presented. The patient, 72 years old, entered the hospital with a history of pain for two months in the chest or back in the mid-scapular region. The chest examination showed only some rales at the right base. Scant sputum was negative for tuberculosis. *x*-Ray report "findings suggestive of old infectious process, cannot rule out possible malignancy." No adenopathy noted. Patient died 5 weeks after admission. Three days before death a small tumor was noted on chest wall and excised. It showed carcinoma.

The autopsy showed primary carcinoma at the right bronchus, with metastasis to kidney, liver, bone, terminal pneumonia. It was surprising how few were the physical signs five weeks before death.

Earlier cases of Drs. Black and Sophian were briefly reported in connection with the exhibition of specimens from the laboratory.

Dr. Lockwood showed *x*-rays of these cases and others. There were serial negatives in some cases. It was evident that close observation and experience were needed to make the diagnosis. Dr. Lockwood showed the fine points which helped to make the tentative diagnosis between carcinoma and tuberculosis.

Dr. Lockwood contributed this to the discussion:

Mr. L., the case under discussion, presents the typical picture of an incomplete obstruction of the lower right bronchus with infiltration, bronchial dilatation and sacculation, with a small well defined mass in the region of the right bronchus.

One will note the lack of aeration of the entire right lung field as compared to the left, with evidence of a few small nodules in the upper portion of the right lung field. This is the typical picture that we see in an incomplete obstruction of a bronchus whether it be due to a car-

cinoma or to some other lesion that produces a partial obstruction.

The second case under discussion by Dr. Black, presents a different picture, that of a homogenous area of density that is well defined, that is undoubtedly due to an obstruction complete in one of the smaller bronchi in the lower right lung field. This could be due to a carcinoma at this point. However, the fact that we feel that it is a complete obstruction followed by the resultant atelectatic change and the fact that this patient, or rather this area of homogenous opacity cleared up under *x*-ray therapy, makes us feel that we were dealing with a mucous plug rather than an obstruction due to a malignancy. Time will be the only factor that will give us a definite finding in this case.

In discussion of carcinoma of the lung we find that it arises from three different types of cells: (1) from the bronchial epithelium; (2) from the mucous glands and (3) from the alveolar epithelium.

I want to point out the remarkable changes in the shadows on the roentgenograms which take place as the disease progresses, and to indicate the role which bronchostenosis plays in the production of these changes. In tracing the events which accompany the development of bronchial carcinoma as the tumor grows it does two things locally: (1) it invades the surrounding tissue and (2) it gradually fills up the lumen of the bronchus causing more and more obstruction. In some cases it finally obliterates it completely. Occasionally the disease is terminated by hemorrhage or some other accident before bronchostenosis occurs. When complete occlusion occurs there is a collapse (atelectasis) of the surrounding part of the lung because the air remaining in the alveoli is quickly absorbed by the circulating blood. When the obstruction is incomplete the bronchi distal to it become dilated. Hence, in the gradually developing stenosis of a bronchial carcinoma the condition is first that of incomplete obstruction and bronchiectasis follows with infection in its train. As the occlusion becomes more marked atelectasis with its ensuing fibrous changes complicates the picture,

although apparently it does not take place as suddenly as it does in a normal lobe. As a result of the atelectasis or of the infection, or of both, there is a marked thickening of the pleura. This sometimes is accompanied or followed by an effusion which may be limited by the pleural adhesions. With the development of bronchostenosis definite changes may take place in the clinical picture as well as on the roentgenograms. As far as its physical effects are concerned, it seems well to consider bronchial carcinoma as developing in two stages: (1) stage of invasion; (2) stage of bronchostenosis, characterized by: (a) bronchiectasis; (b) infection; (c) atelectasis; and (d) thickening and adhesions of the pleura with or without fluid.

Dr. Narr presented slides of photographs and sections of carcinoma of bronchus and lung and other malignancies of doubtful classification.

It seemed evident from the material at hand in the Research Records and Laboratory that primary carcinoma of the lung was less rare than is generally supposed, and also that careful study could often make a diagnosis reasonably early and enable the physician to at least give a correct prognosis.

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### TUBERCULOSIS ABSTRACTS

The seventh conference of the International Union against Tuberculosis was held in August, 1930, in Oslo, Norway. Representatives from almost every nation attended the meeting. Three main topics were discussed: "BCG Vaccination," led by Professor Calmette of Paris, "Thoracoplasty," opened by Professor P. Bull of Oslo, and "The Teaching of Tuberculosis to Students and Doctors," reported by Professor His of Berlin. Excerpts of the discussions which follow are derived from the Quarterly Bulletin of the Union, Vol. VIII, No. 4.

#### PREVENTIVE VACCINATION AGAINST TUBERCULOSIS BY MEANS OF BCG

Professor Calmette summarized the status of BCG. He defined immunity as a peculiar state of resistance to reinfections, depending on the presence of a few specific bacilli or a benign, non-pro-

gressive tuberculous lesion. Attempts to obtain immunity by killed bacilli have consistently failed. BCG is a strain of living tubercle bacilli the characteristics of which are hereditarily fixed. When injected into the body, it produces tuberculins and exerts antigenic functions. It has lost all capacity to give rise to progressive tuberculous lesions.

Immunization can take place at any age, provided the individual is free of any bacillary contamination and reacts negatively to tuberculin. Allergic individuals derive no benefit from BCG. Newborn infants of tuberculous families should be inoculated promptly before they have come in touch with virulent bacilli. The culture may be given hypodermically or by mouth. To be successful, vaccination by mouth must occur within ten days following birth as during this time the intestinal mucosa consists only of protoplasmic cells and the living elements of BCG are then easily absorbed and scattered in the infant's lymphatic system.

Since 1924, BCG vaccination has been practiced in seven European, and four South American, countries and has been given a trial in many other countries. Vaccination has no harmful influence; the general morbidity and mortality are less among vaccinated children than among unvaccinated, and the tuberculosis death rate among vaccinated children living in tuberculous families is almost nil. Vaccinated infants must, however, be protected for approximately one month after birth, either by isolating the children from the source of infection or by educating those who care for them. Calmette claims that the objections which have been raised against BCG could not be maintained and that the vaccine should be generally applied.

Several delegates reported the results of their experiments with BCG, which deviated but slightly from those of Calmette. Agreement was, however, not unanimous. Among those who disagreed with Calmette are the following:

E. A. Watson of Canada found in his experiments on animals that BCG has not been entirely deprived of virulence. He had also restored virulence to three



strains of BCG as the result of inoculation in serial passages. Dr. Kethner of Germany did not admit the proof that BCG is a fixed virus. Professor Lowenstein of Austria thought that vaccination with living bacilli was a delusion. Professor Morelli of Italy attributed the good results obtained through BCG vaccination to the prophylactic measures which were carried out simultaneously.

#### THORACOPLASTY IN THE TREATMENT OF

##### TUBERCULOSIS

Professor P. Bull described his personal operative technique and the results obtained by him and his colleagues, on which he bases these conclusions:

Patients with unilateral or practically unilateral pulmonary tuberculosis, in whom an artificial pneumothorax cannot be induced or does not yield the desired results, may be cured by a complete or partial extrapleural thoracoplasty alone or in combination with a pneumothorax or exercises of the phrenic nerve.

The operation must be undertaken only after consultation with the physician in charge of the case when he has, after a considerable observation period, been able to form a definite opinion on the prognosis of the case.

The other lung must show no clinical signs or, if they exist, they must be slight and stationary.

The extrapleural thoracoplasty is carried out through a paravertebral incision, with resection of the ribs, from the eleventh or tenth to the first inclusive.

The resection of the ribs must be undertaken as far back as possible, right up to the transverse processes of the vertebrae.

The two-stage operation gives a lower mortality than the one-stage operation.

The operation does not entail any appreciable permanent discomfort.

The choice between a local and a general anesthetic does not seem to affect the results appreciably.

A thoracoplasty is indicated when improvement has not followed three or four months' sanatorium treatment, and an artificial pneumothorax cannot be induced with success.

Recurrent hemoptyses constitute an additional indication for operation.

Cavities as large as, or larger than, a walnut heal more rapidly and surely after an operation than under expectant treatment.

If a cavity does not collapse completely after a thoracoplasty, it may be made to do so by a pneumolysis and the employment of a fat graft or a paraffin filling, plugging with tampons, or even drainage.

The chronic productive forms of pulmonary tuberculosis are those best suited for a thoracoplasty. It is most dangerous to touch the purely exudative forms.

From 35 to 45 per cent of the patients who cannot be saved by other means may be so by a thoracoplasty, becoming to all intents and purposes fully fit for work.

Some 20 per cent benefit from the operation, but ultimately die of tuberculosis.

Some 6 per cent become worse after the operation.

Some 10 per cent die from the operation; i.e., within eight weeks of it.

All sanatorium physicians and general practitioners should know the indications for, and the results of, extrapleural thoracoplasties. No one has any longer the right to withhold from patients suitable for this operation the chances it gives them.

#### THE TEACHING OF TUBERCULOSIS TO STUDENTS AND DOCTORS

Professor His had questioned all civilized countries relative to the teaching of tuberculosis. Replies to this inquiry constitute the basis of the report and justify the following conclusions

The teaching of tuberculosis must be given within the compass of the clinical teaching of internal medicine, children's diseases, surgery and dermatology.

These clinics must consequently admit a certain number of tuberculous patients in all stages of the disease and maintain, if necessary, a connection with tuberculosis departments in other hospitals, sanatoria, and dispensaries. Students must be given an opportunity to visit sanatoria and dispensaries.

Special courses and opportunities for practical work on tuberculosis should be made available, but they need not be compulsory.

Postgraduate courses for doctors on the pathology, diagnosis, treatment and prophylaxis of tuberculosis must be organized in such a way that every practitioner may get an opportunity, at certain intervals, to bring his knowledge up-to-date.

Moreover, it is highly desirable that complete courses be organized on tuberculosis as a whole, or on certain specified problems.

A doctor who wishes to improve his knowledge of this subject ought to be given an opportunity to make a practical study visit to a sanatorium or a dispensary.

Medical officers need a thorough training and postgraduate knowledge in this field of medicine.

Attendance at national and international conferences ought to be encouraged by public authorities.

Dr. Willard B. Soper of the United States, one of those who took part in the discussion, remarked that "instruction in the different medical schools shows great differences, which can almost always be ascribed to the presence or absence of one or more individuals on the teaching staff who are vitally interested in this disease, men with whom the study of tuberculosis has become a passion and who find their greatest satisfaction not only in adding to their sum of knowledge but also in imparting it to others."

He described the postgraduate course given at the Trudeau School of Tuberculosis at Saranac Lake, which he regarded as a great influence in raising the standard of knowledge of tuberculosis in America.

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### Migraine

The fifty patients reported on by Clifford J. Barborka, Rochester, Minn. (J.A. M.A., Dec. 13, 1930), have been on the ketogenic diet from three to thirty-six months. For purposes of study the cases have been tabulated in three groups: (1) those in which the attacks of migraine have been controlled by the ketogenic diet; (2) those in which there has been definite improvement by lessen-

ing of the frequency or severity of the attacks, and (3) those in which the treatment failed. The age of the patients varied from 16 to 66 years; the period over which attacks of migraine had occurred varied from four to fifty-four years prior to the time of treatment. Fourteen of the fifty patients controlled the migraine by the use of the ketogenic diet. The cessation of the headaches varied from the time ketosis developed to as long as three months. Most of the patients in this group maintained constant ketosis; a few experienced temporary disappearance of ketosis for a few days. The patients in this group have been on the diet from seven to thirty-six months. Twenty-five patients have been definitely benefited; the attacks of migraine are less common and less severe. Only two patients maintained ketosis; the remainder were periodically in ketosis. The migraine of some of the patients in this group was controlled for the time they were in ketosis, and when they broke the diet, recurrence of the migraine followed. Eleven patients did not derive any benefit from the procedure. These patients made an effort to follow the diet from three to six months. Two patients maintained ketosis constantly, but without influence on the attacks. Four patients were in ketosis periodically, and the remaining patients did not reach the state of ketosis. It should be noted that in the fourteen cases in which the attacks were controlled, diacetic acid, tested for daily, was always present in nine cases, and was present intermittently in five. In the twenty-five cases in which the condition was improved, ketosis was maintained in only two, and in twenty-three it was periodic; the diet apparently produced a state of threshold ketosis. Of the eleven patients who were not benefited, only two maintained the diet accurately and were in a state of ketosis, and this was for four months only; they became discouraged because of not receiving benefit and discontinued the diet. Four of the eleven patients were periodically in ketosis and five did not reach this state at any time.



# THE JOURNAL

of the

## Kansas Medical Society

**W. E. McVEY, M. D. - - - Editor**

ASSOCIATE EDITORS—L. W. SHANNON, L. B. SPAKE, P. S. MITCHELL, O. P. DAVIS, J. T. AXTELL, J. F. GSELL, C. C. STILLMAN, ALFRED O'DONNELL, H. O. HARDESTY, I. B. PARKER, C. H. EWING, W. F. FEE.

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### PUBLICITY

The consensus of opinion in the medical profession generally is that some sort of publicity should be supplied, by which the public will be made to understand the nature, the purposes and the results of the efforts made by scientific medicine in the prevention, control and cure of disease. While it is conceded that some publicity is advisable, in fact necessary to secure that degree of co-operation that will ultimately mean success, there are many different opinions as to the character of the publicity to be provided and the methods and media for its distribution.

The first point to be determined is what it is desirable to tell the people. It seems rather absurd that the medical profession should attempt to teach the people how to diagnose and treat their diseases. Even if it were possible that is not what the people want. They want to know that those physicians in whose care they place their health and lives are competent. This does not mean that publicity should be given to, or to the work done by, any individual or group of individuals, or to any school, clinic or hos-

pital. Confidence in the knowledge and skill of members of the medical profession will be most permanently established when the people understand the sources of our knowledge and the methods by which it is acquired. Even among ourselves it is hard to supplant long cherished theories with scientific facts, and in order to convince the more skeptical it is often necessary to present in detail the methods by which such facts have been determined. So may the people also be convinced.

Confidence in the individual is necessary of course but that is a proposition for him alone. Confidence in scientific medicine, on the other hand, is a problem with which the whole profession is concerned, and it is for the purpose of establishing such confidence that publicity campaigns should be planned and conducted by such organizations as ours.

### METHODS AND MEDIUMS

A considerable variety of methods and mediums for medical publicity campaigns have been suggested and tried. Public addresses and radio talks by well known men in the profession have an important place in these campaigns, but in the nature of things they are more or less limited as to subject and in both of them the personality of the speaker is too predominant. Too frequently the dictum of some man who has gained notoriety or renown in the medical profession arouses mistrust in his hearers and causes embarrassment to practitioners who are equally competent if less renowned.

Public meetings in which public health measures are explained and discussed, also have a place in such campaigns as do also the various kinds of free clinics if properly controlled and supervised, but these are also limited in their results and in the number of people they reach.

For a satisfactory campaign some me-

dium must be selected that will serve to distribute the material over a large territory and attract interest and attention. Newspaper advertising has been tried out in a number of states and in several communities in this state. Opinions differ as to the results, but the reports received do not encourage extensive investments along that line. A certain, one might say limited, amount of newspaper advertising may be worth while in securing the good will of the newspapers in which it is placed, but no important results should be expected from the advertisement itself. Nothing of importance can be gained from heavy investments along this line. However, if this kind of publicity is to be utilized there is reason to believe that the best results will be obtained from space in the small weekly papers that are published in every county in the state. Newspaper advertising campaigns in any case are expensive, too expensive for such an organization as ours to undertake.

#### A POPULAR HEALTH MAGAZINE

The success and popularity of Hygeia has demonstrated the value of this kind of medium and suggests the advantages of a popular health magazine devoted particularly to the interests of this state. A magazine in which the nature, the purposes and the results of the efforts of scientific medicine could be discussed in terms easily understood by the public should attract attention and awaken considerable interest. If there were also included departments devoted to hygiene of the home, the care of children, food and its preparation, and others that may be suggested, it would appeal still more strongly to the people our publicity campaign should reach. The expense of publishing such a magazine would not be too heavy for the Society to undertake, it would cost less than some of the advertising campaigns seriously considered by

a number of our county units. And it is possible that within a short time it could be made self supporting.

The success of such a publication, as a medium for our publicity campaign and as a business proposition depends entirely upon the prompt development of its circulation. To be of any value for publicity and to make the venture financially possible it should have an immediate paid circulation, covering every section of the state, of at least ten thousand. That is the only problem to be solved and it is easy of solution if the members of the Society are as much interested in the matter of publicity as they should be. There are approximately fifteen hundred members in good standing and if each member will subscribe for ten of his patrons we would have fifteen thousand subscribers to begin with.

It would be a nice compliment from the doctor to his patient to send him a year's subscription to such a magazine. It would be an excellent investment for a doctor to send a complimentary subscription to each of the families by whom he is employed.

Letters will be mailed in a few days to each member of the Society asking him to pledge at least ten subscriptions at fifty cents each.

#### WHY?

This proposition was submitted to the Bureau of Public Relations at its meeting in January. After some discussion it was decided to leave the matter for final determination at the annual meeting in May. In the meantime in order that a fair estimate may be made of the interest the members of the Society may be expected to take in this kind of a publicity campaign each one will be asked to pledge as many subscriptions as he feels would best serve his interests.



## THE DEATH PENALTY

It is not unlikely that the legislature will enact a law prescribing a death penalty for certain offenses. There seems to be some idea that the restoration of a death penalty in this state will prevent those crimes for which it is prescribed. It seems reasonable. That was presumably the theory of the lawmakers who first established the death penalty, but a great many years of experience yield statistics which seem to controvert the theory. It must be admitted, however, that the minds of those old lawmakers as well as the minds of our modern ones, were influenced somewhat by the primitive urge for retaliation or revenge. Sentiment has had a great deal to do with the evolution of criminal laws, rather to the detriment of a social, moral and economic stability.

It may seem paradoxical for one to say that he is opposed to inflicting a death penalty as a punishment for murder but is in favor of putting murderers to death. However there are those who believe that there is no adequate punishment for murder and that nothing would be gained by punishment anyway, but a murderer is a menace to the public and should be killed, not tortured to make a spectacle for a gloating multitude nor to create a thrill for a few invited guests, but destroyed by some humane and painless method. There is neither justice or economic sense in confining a murderer in prison for the rest of his life at the State's expense. The only excuse for confining him would be that he might be put at some productive labor until he had reimbursed the State for its expense in apprehending and convicting him, or in case he had murdered the head of a dependent family that his labor might support them until such support was no longer required. But as soon as this had

been accomplished he should be put out of the way.

It gives one only some mental satisfaction to send to prison a thief who has robbed him of a thousand dollars, that does not restore the money he has lost. If the thief were made to work at some productive labor until he had paid back the stolen money and reimbursed the state for its expense, that would be restitution rather than punishment, and yet thieves would find little encouragement to repeat such experiences.

## OUR ROADS

If the legislators don't weaken it is possible that the people will be permitted to know how the millions of dollars that have been collected for highway construction have been spent. A glance at the latest Kansas road map reveals the fact that we have comparatively little pavement in the State, no through state highways that are paved. Considering the length of time the state has been engaged in highway construction and comparing the results with those in other states, it does seem about time the people were informed as to what has been done with these millions.

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## CHIPS

Warts are annoying things to those who have them and sometimes quite as annoying to the man who tries to cure them. Montgomery and Culver describe a method of treating them in the February number of the *Archives of Dermatology and Syphilology*. The flat warts are superficial and may be curetted off level with the skin. The affected surfaces are first thoroughly soaked with a boric acid solution using two heaping teaspoonfuls of the powder to a bowl of water. When well soaked the warts are soft and are easily scraped off. The surface is again soaked with the boric acid solution and when the bleeding has stopped it is anesthetized with a solution of procaine hydrochloride and epin-

aphrine and then the surface is touched with glacial acetic acid. An antiseptic ointment is applied consisting of salicylic acid 1 dram in two ounces of boric acid ointment. The parts are first soaked with a saturated solution of boric acid and when dry the ointment is rubbed in. The warts classed as *verruca vulgaris* are more deeply seated, the papillae extending well down into the skin. These can be pried out by pressing the curette against the side. Sometimes quite a deep hole is left and there is a good deal of bleeding. This is controlled by means of a boric acid compress. The cavity should be cleaned out with a small curette and then cauterized with trichloroacetic acid. A few crystals of the acid are dissolved in a little water and the cavity swabbed out with cotton twisted on a toothpick dipped in the solution. The authors mention numerous instances where warts have disappeared unexpectedly.

There have been almost as many theories of the pathogenesis of gastric ulcer as methods for determination of sex. After presenting a very elaborate review of the theories that have been advanced Held and Goldbloom in the *Medical Clinics of North America*, September, 1930, arrive at the conclusion that no single cause can be considered solely responsible for peptic ulcer. They believe the vascular theory of Virchow and Cohnheim is important in explaining the direct cause of ulcer. But in the majority of cases there is no evidence of vascular disease or infarction. They suggest that a spasm of the vessels has caused the disturbed nutrition in that part of the mucosa supplied by the vessels that eventually leads to the formation of ulcer. There are predisposing causes, however, that are regarded as constitutional. An ulcer acquired by one with an asthenic stomach, resulting from various factors, is usually gastric. In a condition of hypersthenic stomach the ulcer is generally duodenal. The location of the ulcer they suggest is determined by the anatomical architecture, the blood supply, musculature, innervation and the area of mucous membrane. Why ulcer occurs in some people and not in others

with the same conditions is not at this time easily explained.

Chronic anal sphincterismus is the term used by Garnett in the *Surgical Clinics of North America* for December to describe what is ordinarily recognized as a tight sphincter. Garnett believes a good many cases of constipation are due to this condition. In some cases the tight sphincter is associated with or has been preceded by fissure, but there are numerous cases in which there are no irritative lesions and no scar tissue. He mentions as the too prominent symptoms of a tight sphincter, the consciousness of a firm mass just behind the sphincter which it is difficult to expell, and the diminished caliber of the constipated stool. The ribbon stools, he says, are more frequently caused by tight sphincter than by cancer to which they have so frequently been attributed. When in these cases the sphincter is completely dilated the constipation is relieved and in many cases permanently relieved. He states that after a thorough dilatation the spasticity does not recur. To one who is familiar with the resistance of the normal sphincter the sphincterismus will be readily detected by a digital examination.

## R SOCIETIES

### CENTRAL KANSAS SOCIETY

The Central Kansas Medical Society met at St. Anthony Hospital in Hays, January 27, 1931. The meeting was called to order by President L. V. Turgeon and program was as follows:

Dr. G. Wilse Robinson of Kansas City gave a paper on dementia praecox which was very interesting. Dr. Holbrook of Kansas City opened the discussion.

Dr. Alfred O'Donnell of Ellsworth showed a case of purpura, complicated by eczema.

Dr. Stockwell of McCracken showed a case of psoriasis. This was discussed freely by everyone.

The minutes of the last meeting were read and approved. Officers for the next year were elected as follows:

President, H. S. O'Donnell, Ellsworth;



vice president, J. R. Betthausen, Hays; secretary and treasurer, F. K. Meade, Hays; censor, C. M. Miller, Oakley, to replace C. H. Jameson.

It was decided the next meeting would be held at Ellsworth. Following the business meeting the doctors were taken on a tour of inspection through the new wing of St. Anthony's Hospital and at this time moving pictures were made of the medical society and hospital, which we hope to show to members at the next meeting. Following this a dinner was served by the Sisters in the Function Room of the hospital.

After dinner Dr. R. W. Holbrook of Kansas City gave a very interesting talk on Medical Economics. This was freely discussed.

The Society gave a rising vote of thanks to the Sisters for their entertainment. There were forty members and several visitors present.

F. K. MEADE, Sec.-Treas.

#### FRANKLIN COUNTY MEDICAL SOCIETY

The Franklin County Medical Society met in regular session January 28, 1931, at the Nelson Hotel, Ottawa, Kansas. Dinner was served to about twenty members at 6:30 p. m. During the repast Mr. F. J. Miller of Ottawa talked to the profession urging them to increase their subscriptions to the new Ransom Memorial Hospital.

Dr. W. F. Crew of Ottawa, gave an interesting paper entitled, "Some Observations and Remarks on Common Diseases of the Eye, Ear, Nose and Throat." Dr. J. F. Barr of Ottawa, read a paper entitled, "The Value of the Leucocyte Count in Diagnosis and Prognosis of Acute Surgical Conditions." Both papers caused considerable comment and a good discussion followed.

At the business meeting which followed, the president appointed the membership and executive committees for the ensuing year. Some other business was taken up and acted upon. The meeting adjourned at 10:00 p. m.

HOBART K. B. ALLEBACH, Sec.-Treas.

#### CLAY COUNTY MEDICAL SOCIETY

The regular meeting of the Clay County Medical Society was held in the

sun room of the Clay Center Municipal Hospital on the evening of February 11, 1931.

The meeting was called to order by the president, Dr. C. C. Stillman, and the minutes of the preceding meeting were read and approved. The application of Dr. D. A. Bitzer of Washington, was approved and he was elected to active membership in the society.

Following the business meeting, Dr. D. B. Conwell of Halstead, gave a very interesting and instructive talk on "Anterior Poliomyelitis" reviewing the symptoms, findings, diagnosis, treatment, and end results of some 300 cases which had come under his observation.

Visitors present were Drs. Conwell and Algie of Halstead, and Dr. Crevis-ton of Oldsburg.

On motion the meeting adjourned at 9:39 p. m.

F. R. CROSON, Secretary.

#### FRANKLIN COUNTY SOCIETY

The Franklin County Medical Society met in regular session at the North American Hotel, Ottawa, February 25. Dinner was served at 6:30 p. m. with 22 members present.

At the business meeting which followed, Dr. Eugene L. Aten and Dr. Paul E. Davis, both of the State Hospital at Osawatomie, were voted into this society.

An excellent program was then enjoyed by the members. Dr. E. R. Deweese, Kansas City, Mo., presented a very interesting practical talk on "x-Ray Interpretation." Many films were shown of chest, gastro-intestinal tract, and gall-bladder pathology. Dr. Frederick B. Campbell also of Kansas City, read a very instructive paper on "The Treatment of Rectal Diseases" in conjunction with a movie on "Diagnosis." Both papers brought out some lively discussion.

HOBART K. B. ALLEBACH, M.D., Sec.

#### DEATHS

George D. Pearn, Dearing, aged 61, died December 14, 1930. He graduated from New York Homeopathic Medical College and Flower Hospital in 1894.

Jacob Lazen Hausman, Marysville, aged 69, died February 2, 1931, in Columbus, Ohio, of leukocythemia. He graduated from Emsworth Medical College, St. Joseph, Mo., in 1895. He was formerly health officer and was for many years surgeon for the Central Division of the Union Pacific and the Rock Island railroads. He was a member of the Society.

James B. Jones, Garnett, aged 82, died December 8, 1930, of carcinoma of the stomach. He was licensed in Kansas in 1901. Was a Civil War veteran.

Robert E. Barker, Kansas City, aged 57, died recently following an operation for gall stones. He graduated from the University of Kansas School of Medicine in 1901. He was a member of the Society.

Wm. G. LeRew, Glade, aged 68, died recently. He graduated from Northwestern Medical School at St. Joseph, Mo., in 1892.

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#### MEDICAL SCHOOL NOTES

Dr. Frank C. Neff, head of the Department of Pediatrics, is a member of the Medical Committee of the White House Conference on Child Welfare. Dr. Neff attended the meeting of this committee at Washington on February 19, 20 and 21.

Dr. H. R. Wahl, dean of the Medical School, and Dr. Frank C. Neff attended the annual congress of the Council on Medical Education of the American Medical Association, which was held in Chicago, February 16, 17 and 18.

Dr. Thomas G. Orr recently visited at the Mayo Clinic in Rochester, Minnesota.

The Ways and Means Committee of the House recently visited the Hospital and Medical School.

National Board examination was given at the University of Kansas School of Medicine on February 11, 12 and 13.

The Post Graduate Course in Surgical Diagnosis was held at the Medical School, February 9 to 13. These courses were sponsored by the University Extension Division of Lawrence. The clinics were well attended. The visiting

clinicians were: Dr. George W. Crile, Professor Emeritus of Surgery, Western Reserve University School of Medicine, Cleveland, Ohio; Dr. D. K. Rose, Assistant Professor of Urology, Washington University Medical School, St. Louis, Missouri; Dr. G. DeTakats, Assistant Professor of Surgery, Northwestern University Medical School, Chicago, Illinois; Dr. Loyal E. Davis, Associate Professor of Surgery, Northwestern University Medical School, Chicago, Illinois, and Dr. Louis J. Hirschman, head of the Department of Proctology, Detroit College of Medicine, Detroit, Michigan.

Dr. Charles Stelle, '27, who is now stationed in Brooklyn, New York, with the United States Navy, recently visited the Medical School.

Dr. Andrew Olson, '25, recently visited the Hospital. Dr. Olson is now located in Wichita, Kansas.

Dr. O. S. Randall, who was Resident in Surgery and later Resident in Pathology, has received a three year Fellowship appointment at the University of Minnesota, beginning February 1.

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#### Kansas City Session of Goiter Association

Under the presidency of Dr. Kerwin W. Kinard, Kansas City, the American Association for the Study of Goiter will hold its 1931 session in Kansas City, April 7, 8, 9. The association was organized in 1925 by a group of men who believed there was a distinct place for a society whose members would study co-operatively the various medical, surgical, pathological and roentgenological conditions associated with thyroid disease. The phenomenal increase in membership and the character of contributions to the programs of the meetings indicate that the judgment of the organizers of this association was well founded.

It is probably true that many persons now die from nervous and cardiorenovascular manifestations which can be traced to a toxic goiter as the underlying cause. Many of these persons can be saved to become strong and happy citizens with probably no economic loss to the country if we can diagnose the goiter



condition in its early stages and institute corrective therapy. It is one of the principal functions of the association to discover methods of early recognition and proper treatment of abnormal conditions in the thyroid gland.

There are few physicians now practicing general medicine who have not been captivated by the tremendous strides the profession has made in studying the etiology, diagnosis and treatment of goiter. All of us, general practitioners as well as specialists, are deeply interested in knowing what recent advances have been developed in the treatment of diseases of the thyroid gland. Almost daily we are learning that dysfunction in this organ may have effects so remote that the mind only slowly questions the possibility of a thyroid disturbance as the underlying cause.

The program at the Kansas City session will include talks and papers by men well recognized throughout the country for their progressive studies in goiter. Operative clinics as well as diagnostic sessions at the different hospitals will be helpful diversions to the didactic work. The meeting is sponsored by the Jackson County Medical Society, the Kansas City Southwest Clinical Society and the Kansas City Academy of Medicine.

Every member of the State Medical Association is invited to attend the meeting. It is believed that the visit will well repay those who do go for they will hear the leaders in this phase of medicine and surgery tell about the newest and best methods of diagnosing and treating thyroid conditions. The society has tried to distribute its proceedings each year and in this way reach as many members of the profession as possible, but the printed page cannot take the place of the stimulus gained by personal attendance and visualization of the one who delivers an address.

Members desiring further information concerning the meeting may address the president, Dr. Kerwin W. Kinard, 1102 Professional Bldg., Kansas City.

## **Panoramic View of the Woman's Auxiliary to the A. M. A. in Four Articles**

### **2. NORTH CENTRAL STATES**

MRS. JAMES BLAKE

According to the Constitution and By-laws of the Auxiliary to the American Medical Association the organization program is carried on by the active work of the vice presidents. Mrs. Southgate Leigh of Norfolk, Va., is first vice president and automatically chairman of organization. Due to her location on the map the second vice president finds herself interested in the destinies of the north central group of states.

Looking backward, with pleasant memories to Detroit, and forward with delightful anticipations to Philadelphia we find this group of states all doing something of common interest.

In the January *Journal of the Indiana Medical Society*, the Auxiliary president stresses the importance of more constructive work on the part of her organized county groups. "Physicians' wives," she says, in her New Year's address, "hold an enviable position in being privileged to have a part in a world wide health program, and I would urge every physician's wife, to bring before other women *dependable* knowledge, and a just appreciation of the real spirit and purpose and actual achievements of the medical profession." So from Indiana we know we are to have constructive work during this year. Physicians as a class are not prone to participate in legislative matters but when four distinctly separate bills, which affect the profession directly, are presented during one session of a state's legislature, it is time to be up and doing.

Such is Indiana's situation this year and the doctors of the 7th district have thought it worthwhile to *instruct* their Auxiliary members on these subjects that their influence may be *properly* used. The Indiana journal never fails to give the Auxiliary space, and it is little wonder the Indiana women are up and coming, when they have such editorial notes to enlighten and guide them in their constructive program work, as one finds in this same journal.

Kansas is slowly getting a few things accomplished. A world wide depression has rendered prophets quite fameless abroad as well as at home, but the doctor's wife in Kansas is coming into her own, and we prophesy that the Auxiliary will climb to the top due to the indomitable spirit of the leaders in that state.

In Illinois the motto might well read—"Builders we are, and builders we must be. Builders, not in stone that shelters life, but builders in life." We find good constructive programs—of well-balanced educational value, we find a journal ever ready to broadcast Auxiliary news, and best of all we find a healthy organization line-up, and an advisory board from their medical society. Several of their county groups are having their members get busy with the "Health Audit Program."

One project worthy of mention comes from Vermillion County on the eastern boundary of the state. The County Auxiliary put on the Health Institute in Danville last November. A member from every agency in the county working out any kind of a health program, was included in the personnel of the speakers. It was for just one day, but it was worth 365 as a rouser for Auxiliary work. It really was sort of a Christmas Seal campaign opening, a get together of club women, and P. T. A. groups in the county. And what a wise idea for a medical auxiliary to have the head lines in the plans for such a "Health Day."

Wisconsin, Iowa and South Dakota are among the latest states to join the National Auxiliary. Organization is the key note for their work, and the National Study Envelopes are offered as program material. Right now if the modern doctor's wife needs to get one thing more than another from her organization, it is the knowledge of what is going on in this world; especially the world of medicine. Women are discriminating more carefully in the clubs they are joining. They are asking what membership will mean to them, what they will get out of it. For that reason the subjects for study should be more carefully chosen, and the roll call should be made to count for something more than jokes and quotations

from forgotten poets. It isn't a pleasant feeling for a busy mother who rides miles to a meeting to say when it is all over, "I can't say I know any more than when I started." And so we find these three states getting themselves established on a firm foundation, with the national program envelopes scattered far and wide to aid and encourage Auxiliary members, already in, and prospective members.

Montana and North Dakota are debating pro-and-con but as Mrs. Hoxie said in her Detroit report, "I believe it will be a mistake from now on to organize a new state, unless it appears reasonably certain that there is interest enough among the doctors who want the Auxiliary, so they will foster it and stand back of it." And so we leave Montana half hearted about forming an Auxiliary, and North Dakota in the air.

We find Michigan giving intelligent co-operation with state and county officials. Women like men are interested in the improvement of civic affairs and healthful living and are realizing that they need to be armed with a definite knowledge of health laws and public health practices.

Missouri is in a very healthy condition. We find that Mrs. A. B. McGlothlin, the president-elect of the Woman's Auxiliary to the American Medical Association, will attend President Hoover's White House Conference for Child Health and Protection to be held in Washington, D. C., February 19 to 21. Mrs. G. H. Hoxie the president for last year will also attend the White House Conference.

Mrs. A. W. McAlester tells us, the women of Missouri are finding the study envelopes, published by the Education Committee of the Woman's Auxiliary to the American Medical Association, most interesting and instructive. The studies on "Common Defects in Children," and on "Diphtheria," "Small Pox" and "Typhoid Fever" were recommended by the Department of Health in the Missouri Branch, National Congress of Parents and Teachers for use on Parent Teacher Programs. Eight hundred copies of each were distributed for use in



Parent Teacher Units. Three hundred were requested and supplied for use in Parent Education Classes. Requests are constantly coming in for additional copies of the studies for use by teachers and Parent Teacher Units. The Department of Public Information of the Extension Division of the University of Missouri is including these studies in its suggested programs for clubs in the Missouri Federation of Women's Clubs, and P. T. A. programs. This department requested back numbers of *Hygeia* for use in such programs. Three hundred copies of *Hygeia* were supplied by women in the state and by the circulation manager and are being extensively used in club programs. The Missouri Chairman of Public Relations is planning to have a copy of each of the studies "Common Defects in Children," and "Communicable Disease Control," sent to each county school superintendent in the state. Several of the County Auxiliaries are using the study envelopes in their programs.

Mrs. M. P. Overholser of Harrisonville, Mo., has been appointed chairman of Public Relations in the Missouri Auxiliary. This Auxiliary maintains a scholarship for a medical student, per capita quotas being assigned to each county Auxiliary.

They also have sent in 30 per cent of the total number of *Hygeia* subscriptions received from all Auxiliaries from January 1, 1930 to January 1, 1931.

Some county Auxiliaries provide *Hygeia* for all their teachers. Among these are Buchanan, Gentry and Lafayette. Cape Girardeau County Auxiliary has just finished paying a \$1,000 pledge to a hospital in the city and is now ready for another kind of work. They are a live group and certainly work hard to be able to accomplish so many wonderful worth while things.

Minnesota the North Star State has had a busy and successful year on organization. The President and Organization Chairman have visited over the state and planned meetings and educational programs with many county groups. In October the International Medical Assembly met in Minneapolis,

and at this time the Hennepin County Auxiliary celebrated its twentieth anniversary, by being hostess for five days to the visiting doctors' wives. A great many social affairs and an Educational Day, which included a speaker on Public Health, were features. Hennepin County is having a year with a definite program. Each month a speaker is scheduled, and one meeting during the year is reciprocity day and each Auxiliary in the state is invited to send visitors. This group features philanthropic work for T. B. patients at Glen Lake and do much for the library at the Sanatorium. They have helped the medical society furnish their library and club rooms spending \$1,000.

Ramsey County does much the same work. They have a scholarship fund for medical students. St. Louis County is noted for work in the public relations field. The state medical journal gives a page to Auxiliary news. One of the other counties takes care of a nurse's scholarship. The Minnesota Auxiliary has a splendid advisory board and a page in the state journal. The President will be one of the speakers on the program for the Annual Conference of Secretaries of the Component Societies of the Minnesota State Medical Association, to be held in St. Paul the first week in February. This is the first time the Auxiliary has been asked to take part in this annual affair. Mrs. Hesselgrave's talk will be, "Uses of the Auxiliary."

And so closing my review of the work of the North Central Group of states may I say again—

Builders we are, and Builders we must ever be

Builders not in stone that shelters life, but

Builders in life itself—ever remembering the future of the world for generations to come depends upon what we *think* and *will* and *do* today

—————R—————

### The Doctors Talk On Nursing

When 756 physicians discussed the nursing question informally, the greatest numbers commented on the fact that there is no shortage in the nursing sup-

ply, that registered nurses are generally competent, and that nursing charges are too high from the point of view of the patient.

This open forum for physicians was held by the Committee on the Grading of Nursing Schools, which is studying the problem of providing ample and adequate nursing service to the public, at a price within its reach. When the committee sent out questionnaires to the physicians, it asked them to write their frank opinions on nurses and nursing on the backs of the questionnaires, after the formal questions had been answered.

Of 376 who talked about the shortage question, 281, or three-fourths, said, "There is no shortage of nurses." Of the 318 who discussed the capability of nurses, 264, or eighty-three per cent, said, "Nurses are generally competent."

A smaller number, 171, were interested in commenting on the cost of nursing service to the patient. All but twelve believed the charges to be excessive, from the point of view of the patient. On the other hand, of twenty-seven doctors who commented on the earnings of nurses, twenty-six said they thought the annual income of the nurse is too low.

A composite picture, built up from these informal comments, might be described as follows:

"The registered nurse is generally competent, often positively heroic. She follows orders, uses good judgment, is usually ethical, is skilled in handling people and has a pleasing personality. But she sometimes steps on medical toes by discussing symptoms and suggesting treatments; she could sometimes be more industrious, and show more interest in the patient.

"She often lacks skill in special techniques and picks and chooses cases.

"There is no shortage of nurses. The nurse's hours are too long, and her income too low. On the other hand, charges are excessive, for the patient."

The physicians who took part in this symposium on nursing represented many branches of the profession and came from ten representative states.

It is significant that, when they could talk of whatever they pleased, so many

doctors should stress the same aspects of the nursing situation, and that there would be the general agreement that exists among the states.

These informal remarks check with the statistical findings, gathered from the questionnaires of 4,000 physicians. Thus, it was found that only two patients out of each 100 could not find a nurse when they needed one. This is confirmed by the general opinion of physicians that there is no shortage in the nursing supply. Nine out of ten, tabulation showed, answered in the affirmative, "Would you like to have the same nurse on a similar case?" Again, the large majority of those who commented on the ability of the nurse felt she is generally competent.

The Grading Committee has been studying some of the problems implied in these comments from the physicians. Its findings show that often, probably, the nurse is not to blame because she "registers against" certain types of illness; or that she lacks skill in special techniques. The reports of what the student nurse does in training reveal that important basic services are omitted from her program by many nursing schools, so that, as a graduate nurse, she either registers against such cases, or shows herself unable to perform properly the nursing duties involved in them.

Physicians commented on this relation between the training of the student nurse and the fitness of the graduate nurse to deal with certain types of patients.

An Oklahoma physician wrote: "In this section of the country, most nurses have excellent operating room training, but poor bedside training." A Massachusetts physician wrote, "The nursing problem in obstetrics is very acute." From Illinois came the comment, "Psychiatric post-graduate training of R.N.'s is too rare and there are not enough really well trained psychiatric nurses for private duty."

New York physicians seem better pleased than those of other states with the breeding and personality of the nurses with whom they come in contact. More physicians of Washington said there was a shortage of nurses, than said



they believed the supply adequate.

Other matters talked about by the physicians were:

13—"Young nurses are better than old ones."

8—"Old nurses are better than young ones."

14—"Nurses' hours are too long."

14—"The schools should raise the entrance requirements."

9—"The professional registries send better nurses."

24—"She talks too much."

14—"She doesn't talk too much."

Some of the miscellaneous comments were:

"Many good nurses work too hard."

"My worst trouble is that I never know a nurse's name. She is a part of the machine and usually fills the bill."

"I have never had any difficulty in securing nurses in this city or its vicinity. In fact, various registries are continually reminding me that they have nurses on hand."

"This particular nurse is intelligent, observing, not afraid to take a severe case twelve miles in the country, well trained, pleasant but strict in following the doctor's orders in regard to the patient, family, and visits. I have had many nurses like this, and some dismal failures. Financial conditions here are such that we have few trained nurses, but we have very little trouble getting one when required. My experience with practical nurses is not so pleasant. I wish every one of my seriously ill patients could have a registered nurse."

Many physicians took pains to stress the value of the nurse's understanding of the mental habits of sick people, in writing of specific examples of nursing care, and her ability to be intelligent and tactful about home situations.

—R—

## BOOKS

The Medical Clinics of North America. (Issued serially, one number every other month). Volume 14, No. 4. (Philadelphia Number, January, 1931). Octavo of 240 pages with 47 illustrations. Per clinic year, July, 1930, to May, 1931. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1931.

Among the outstanding contributions to this number of the Clinics may be

mentioned a review of twenty-six cases diagnosed as duodenitis, by Miller; the problem of the colon bacillus by Rehfus; the various types of extra heart sounds by Wolferth and Margolies. Clark discusses the effect upon the urogenital tract of recurring dental infections. Hartmann discusses lead therapy in myelogenous leukemia. Wahl presents some cases of hypothyroidism, calling attention to disturbances in the gastrointestinal tract. Hitzrot gives a review of one hundred cases of achlorhydria. Bortz gives his observations on the nature of visceroptosis also some studies on the nature and treatment of obesity. Boekus and Bank report a case in which there was independent occurrence of ulcer and cancer of the stomach. There are numerous other very interesting and instructive articles in this number of the clinics.

Modern Methods of Treatment by Logan Clendening, M.D., Professor of Clinical Medicine, Lecturer on Therapeutics, University of Kansas School of Medicine, etc. Fourth edition. Published by C. V. Mosby Company, St. Louis. Price \$10.00.

In this edition the plan of the work has not been changed but considerable new material has been added, made necessary by the constant advances in scientific therapy. Some of the chapters have been entirely rewritten. It has been the purpose of the author to make his descriptions of treatment easily and clearly understood and in this he has succeeded.

Cancer, its origin, its development and its self-perpetuation, by Willy Meyer, M.D., Emeritus Professor of Surgery, New York Post-graduate Medical School, etc. Published by Paul B. Hoeber, Inc., New York. Price \$7.50.

This is a very thorough presentation of what is known about cancer at this time and a comprehensive statement of the author's own views as to the causative factors involved. He denies the autonomy of cancer. He believes that there is a unity in character of all types of new growths. The potential source of all new growths is chronic irritation. In cancer there is a systemic chronic irritation and a local chronic irritation. Either acting alone is harmless but when acting in conjunction are potentially harmful. Predisposition to cancer is essential. Those whose body fluids are highly alkaline are predisposed those

with acidosis are probably immune. The story is particularly interesting whether one accepts the views set out or not.

R

The late William Rockefeller used to tell with delight a story illustrative of the financial genius of his famous brother, John.

"When John was a little fellow," he would begin, "a so-called Indian doctor visited our town with a cure-all. The doctor, to get trade started, took out a bright new silver dollar and said he would auction it off.

"How much am I bid," he said, "for this bright silver dollar?"

"But the crowd was cautious, silent, suspicious. No bids were made.

"How much am I bid?" shouted the Indian doctor. "Come, come, gents! A nickel? A dime?"

"I bid a nickel," piped John D. Rockefeller at last.

"The dollar is yours, boy," said the doctor. "Hand up your nickel."

"Take it out of the dollar," piped little John D., "and gimme 95 cents change."—Boston Globe.

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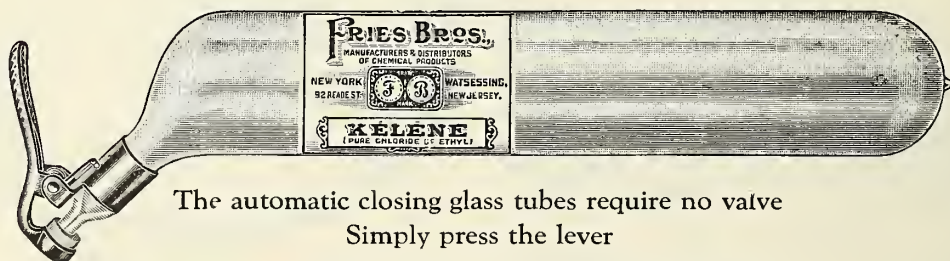
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# THE JOURNAL

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### The Surgical Relief of Intractable Pain in the Trunk and Lower Extremities

WALTER D. ABBOTT, M.D., Des Moines, Ia.

There is nothing more painful than the patient with a chronic disease which produces severe intractable pain requiring increasing doses of morphine to the stage of mental torpor before relief is obtained. Every physician is faced with the problem of pain relief in cases of malignancy of the viscera, pelvic organs and extremities, spinal cord lesions, severe arthritis and neuritis. The sad spectacle of a human being reduced to a craven individual, begging for morphine to allay this pain for even a short while has aroused the sympathy of medical men until it is felt justifiable to resort to destructive operations to accomplish this pain relief with the retention of the patient's mental activity. Numerous surgical procedures have been suggested for this purpose and the operation most frequently applied is that of rhizotomy. Dana was the first to suggest section of the posterior roots for the relief of severe pain, and following his suggestion Bennett in 1886 and Abbe in 1888 performed this operation. In 1908 Forster recommended rhizotomy for gastric crisis. The operation was applied extensively for a time but gradually fell into disrepute because of its failure to relieve extensive pain. Elsberg accounts for the failure on the basis of the wide anastomosis of the peripheral nerves.

To obtain a satisfactory result it is necessary to sever at least three posterior roots and two additional roots both above and below the particular segment, and frequently, when larger areas are involved, an extensive laminectomy would be necessary; thus this is often too severe an operation. Frazier has found that rhizotomy is chiefly of value in cases of painful spasticity. Cushing proposed an even more radical operation

to relieve the severe pain associated with malignant metastasis. In 1910 he suggested "the deliberate transection either of the entire cord or of the posterior columns alone, cephalad to the lesion," and in 1916 performed this operation on a woman who was paralyzed below the twelfth dorsal segment, with freedom from pain until her death six months later.

For a number of years it was believed that Gower's tract carried the fibers of pain and temperature sensations, but Spiller's observation was the first actual verification.

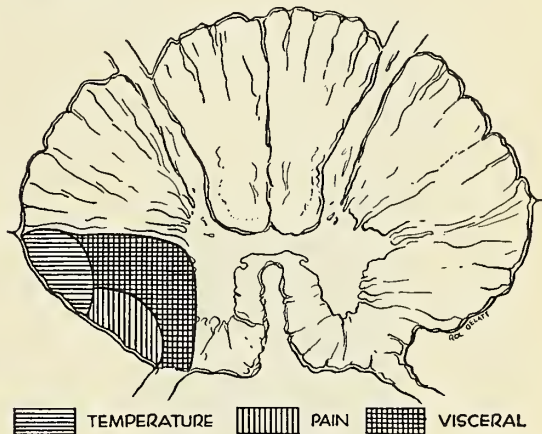


Fig. 1  
A cross section of the spinal cord showing the pain, temperature and visceral sensory fibers in the antero-lateral tract

He observed a patient in 1904 who had complete loss of sensation for pain and temperature in the lower limbs with preservation of tactile sensibility. The patient died several months later and autopsy revealed a solitary tubercle in each anterolateral tract of the spinal cord.

This discovery led Spiller to propose section of the anterolateral tract for intractable pain and in 1911 Martin, at Spiller's request, performed this operation in a case of malignant growth in the spinal cord causing pain in the pelvis and lower limbs. Pain was diminished



and the operation was regarded as a success.

Cadwalder and Sweet undertook laboratory confirmation upon Spiller's suggestion, and concluded that pain sensation in dogs was diminished when the anterolateral tracts were divided.

Following this work chordotomy was then performed by Beer, Tietze, Frazier and Leighton. Numerous painful conditions have been relieved by this procedure, and it carries little risk if properly performed.

#### SELECTION OF CASES

Frazier has mentioned that rhizotomy is most successful in painful spasticity and chordotomy for other types of pain. There are certain cases of spinal cord involvement in which spasticity plays an important role and it is desirable to break the reflex arc by severing the posterior roots. This may be illustrated by the following case history:

Mrs. J. M., housewife, was referred to the department of neurosurgery of Iowa Methodist Hospital by Dr. W. E. Wol-

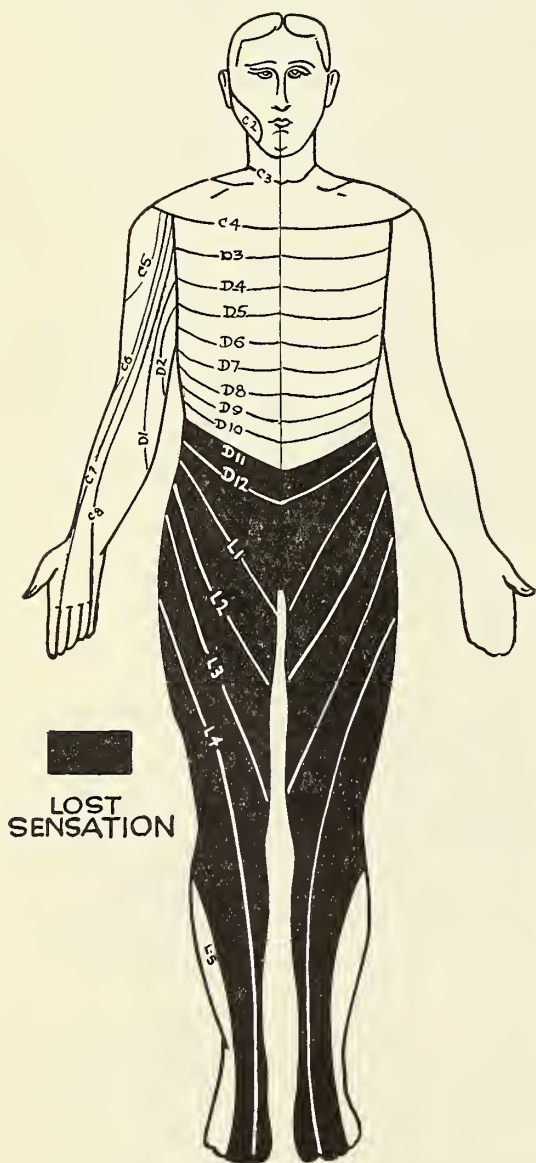


Fig. 2

Illustrating area of lost sensation on ventral surface of body

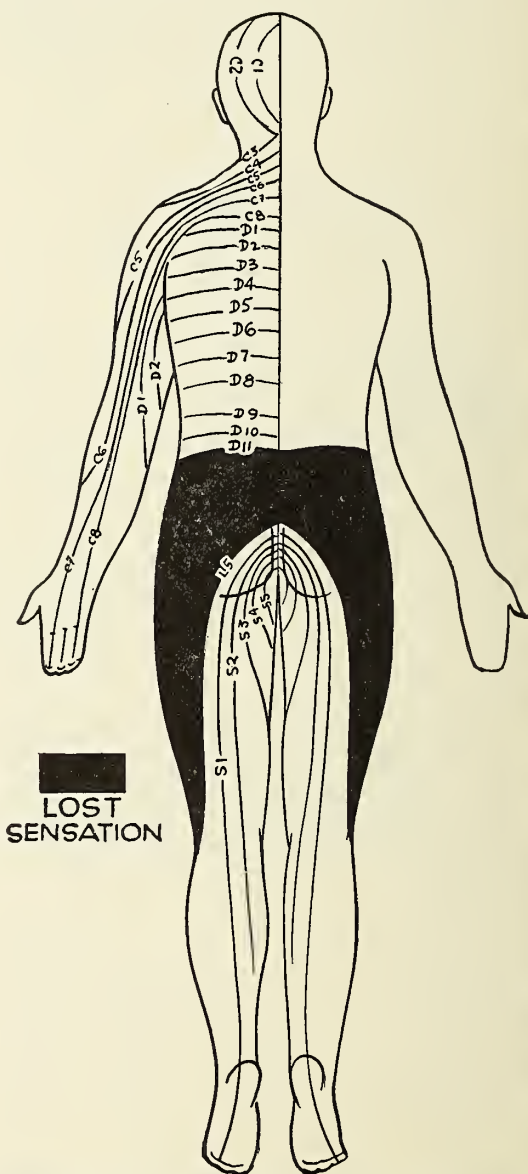


Fig. 3

Illustrating area of lost sensation on dorsal surface of body

cott of Des Moines. She had noted a weakness of the left arm and both legs nineteen months previously following a postpartum infection. She gradually lost the motor power of both lower limbs with a painful spastic contraction of the thighs on the abdomen. She had been unable to lie on her back for over a year and the painful contractions persisted to the extent that it was necessary to hold her knees constantly. The joints had undergone fibrotic changes from being fixed in this marked flexion for so long a time.

A diagnosis of primary lateral sclerosis with marked spastic flexion was made, and on August 16, 1930, section of the 11th, 12th, dorsal and all the lumbar posterior roots was done. The patient obtained immediate relief from the painful contractions and in a week was able to rest comfortably on her back.

The problem here was one of over stimulation, and although chordotomy would have relieved the pain, the spasticity would have remained the same. It was necessary in this instance to break the reflex arc and at the same time accomplish pain relief. In a few weeks orthopedic measures will be applied to correct the joint deformity so the patient can sit in a wheel chair. It is true that the feet remain flexed on the thighs but if the sacral roots had been divided the bladder and bowel control would have been lost. This can be remedied by tenotomy and the flexion of the feet did not cause the severe pain that the constant contraction of the thighs did. It is felt that rhizotomy is indicated in this type of case because the reflex arc must be considered. If pain alone, without spasticity, is the problem then chordotomy should be the procedure of choice.

The following case is illustrative of a case in which section of the anterolateral tracts is indicated:

J. W.: 38, white, male, cab driver, was referred to the department of neurosurgery at Iowa Methodist Hospital by Dr. H. A. Collins of Des Moines. The past history was that of a penile lesion twelve years ago and inadequate antiluetic therapy since the initial infection. Three years ago he began to have

cramplike pain in the epigastrium associated with severe spells of vomiting. These attacks occurred at intervals until January, 1930, when the patient was unable to work because of daily pain and vomiting. He was the typical picture of gastric crisis of lues with fixed pupils, diminution to pain in the lower extremities, intolerance to cold on the trunk, positive Rhomberg and positive Wassermann. His reflexes were not lost and he responded from a general standpoint when given a vigorous course of antiluetic therapy but his pain and vomiting remained resistant. September 5, 1930, a bilateral section of the antero lateral tracts at the level of the 3rd dorsal vertebra was performed with a section of the 3rd, 4th and 5th dorsal posterior roots.

The patient made an uneventful recovery and was driving his cab in three weeks. His pain was relieved but he occasionally vomited. However the administration of bromides and frequent feedings have controlled this difficulty. The patient made an interesting observation that he stepped in some water but was unaware of his feet being wet until he removed his shoes on retiring.

This type of case is one in which chordotomy is indicated and justified. The persistence of vomiting raises the question of the operation going deep enough into the cord to section all of the visceral fibers. There certainly is some neurogenic factor because bromides often control this phenomenon. Perhaps it is to be explained by an additional vagal or sympathetic involvement in occasional cases.

#### OPERATIVE TECHNIQUE

The approach to the spinal cord for either rhizotomy or chordotomy consists of a laminectomy. Some surgeons prefer the old flap incision lateral to the midline but recently the majority of operators have elected to use a straight midline incision. The muscles and periosteum can be reflected without much hemorrhage in the midline approach. The spinous processes and posterior laminae are then removed with a rongeur and bleeding from the bone is controlled with bone wax.



It is necessary to have an exact knowledge of the segmental level of pain distribution before attempting either procedure. It is preferable to cut the antero lateral tracts for pain in the abdomen or extremities at the level of the 5th dorsal segment which is opposite the 3rd dorsal vertebra. I prefer division of the 3rd, 4th and 5th posterior roots in addition to the chordotomy, because that precaution spares the patient post operative distress in the upper level of anesthesia. After opening the dura the posterior

roots are picked up with a hook or forceps, silver clips applied for hemostasis and division of the roots is accomplished with either scissors or scalpel.

To perform a chordotomy the dentate ligament is severed from its dural attachment and the cord is rotated laterally. Either a hook or scalpel is inserted into the cord to a depth of 3 mm. and the antero lateral tract is sectioned from the dentate ligament to the anterior roots. Peet has suggested bringing the scalpel out through the anterior root so

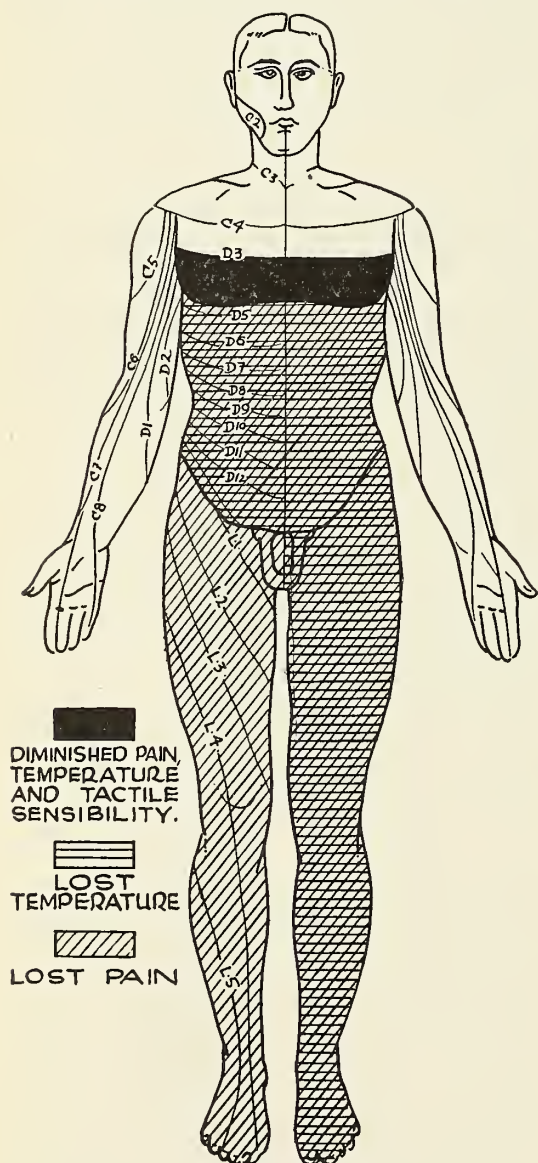


Fig. 4

Illustrating area of lost and diminished sensation on ventral surface of body

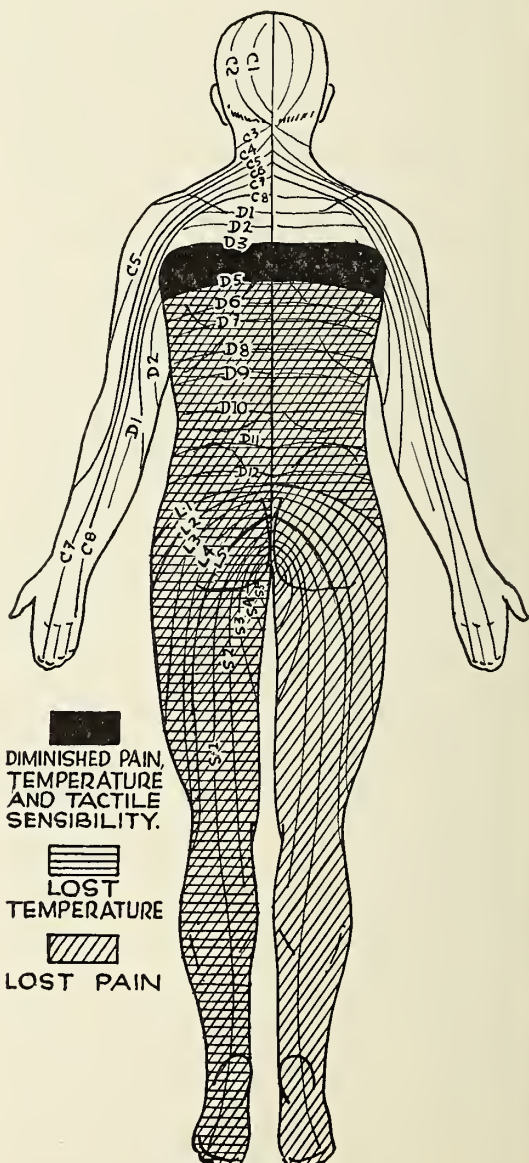


Fig. 5

Illustrating area of lost and diminished sensation on dorsal surface of body

that no fibers will be missed. Although this procedure sacrifices an anterior root it is an excellent plan because it insures an adequate division of the pain and temperature fibers and one anterior root can easily be spared at this level. The danger of this operation lies in cutting the cord posterior to the dentate ligament because the pyramidal or motor tract is in this region. There is seldom hemorrhage in the cord after chordotomy and the only untoward effects I have noted are weakness of motor power for a few days due to edema of the cord.

Some surgeons have suggested only a superficial section of the antero lateral tracts to sacrifice the pain fibers and preserve temperature sensation. (Fig. 1.)

My experience has been that the failures in chordotomy were due to insufficient section and I believe an incision to the depth of 3 mm. is necessary to insure relief from visceral pain.

The dura is closed with interrupted silk sutures and the muscle is closed with chromic catgut. No drainage is necessary and the skin can be closed with silk or dermal sutures.

#### SUMMARY AND CONCLUSIONS

Pain is an important and often, to the patient, a paramount factor in many chronic diseases. If a surgical procedure, although destructive, can afford the patient relief from this intractable pain with the retention of his mental faculties it is preferable to massive and frequent doses of narcotics. However, this operation should only be performed in selected cases and with a thorough understanding of neuro anatomy.

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R

#### The Different Child

G. WILSE ROBINSON, JR., M.D.

NORMA K. POOLE, B.S., Kansas City, Mo.

There have been and always will be children who are different from the rest; children who are mentally below normal; children who behave poorly, and those who have definite neurological diseases that impair their mentalities, and make it impossible for them to go on with the rest of their playmates in school and in society. These children always appear at a disadvantage by comparison with others and they, themselves, realize they are different from the rest. For years, they were considered hopeless. They went to regular schools as long as they could and usually dropped out early, either because they could not be controlled or because they became so large that they and their parents were ashamed to have them attend longer, or their organic disease so handicapped them that they would not be accepted by the school authorities.

Untrained in many cases, full of complexes and inhibitions, because of the gibes of their playmates and their own unschooled thoughts, they were turned loose to become either a menace or a burden to society. Those who were not too crippled worked at day labor and menial work; the rest were either institutionalized or became beggars, paupers or the minions of skilled criminals.

No one was to blame for this condition, because society did not realize in these cases—as in many others—that it was better to train these unfortunates—and as early as possible—than to let them go their way. Busy teachers could not give them special attention, and there was no place else to send them. Because they felt inferior and different from the rest of the children they subconsciously tried to make adjustments, and attempted to satisfy themselves that they were as good as the others in the



school room by creating minor disturbances; by teasing and bullying smaller children and by making themselves a general nuisance. These tendencies were aggravated by punishment, and an inability to understand why they were punished and why they couldn't grasp what the others were doing. Parents at home were loath to understand or recognize the real reasons behind this abnormal behavior, and thought it was only meanness and so, increased the clouded furor of their thoughts.

A generation ago the sciences of sociology, psychiatry and psychology had advanced so far that the skilled thinkers in these fields realized these children must be segregated and placed in skilled hands, so that malicious tendencies might be avoided, and the crippled mentalities trained—slowly but surely—to the utmost of their ability. The special school was devised to meet this need.

Here, all friction is removed; an understanding teacher and doctor study the cases from all angles, and the work is so devised and given to these children that they are not burdened. They are not exposed to cruelties from other children and because of this they do not feel the urge to be "as good as he is," by the only means they know—physical violence. The home influence—which, unfortunately, is usually bad—is removed and they make progress which is surprising. From a sociological standpoint they are better in these special schools, because their influence on normal children is detrimental and depressing. Many a normal child has been seriously handicapped because the home life is so disrupted by the peculiar child, that the normal one does not receive proper attention and understanding from his parents. Parents are prone to feel that the "different" child should have every consideration and come first in all his needs—perhaps rightly. This course creates an irritation and resentment in the minds of the other children, which may lead them into grave behavior disturbances.

So, we have three objects, or reasons why, these children must be placed in special schools, under teachers who are

trained to work with this type of child. Firstly, the child is saved embarrassment and mental torture, which lead him into disturbances of behavior and a feeling of inferiority. Secondly, he responds to training—carefully given, after thorough study—so that he may become as nearly self-supporting as his mentality permits. Thirdly, the other members of the family, and the school group, are saved trying situations, which are harmful to the child and to the rest of the groups.

The types of cases which are helped by special boarding schools may be divided into four great classes of different children: Sub-normal mentalities, behavior disturbances, organic neurological diseases and psychoses.

Sub-normal mentalities may be apparent or real. The apparent type results from lack of opportunity, either because of home surroundings or illness and of course responds well to proper teaching. The real type are those children who, because of undeveloped brains, neurological diseases or psychoses, are unable to learn as well as other children.

The primary behavior disturbances result from some maladjustment. All the other types may show secondary environmental disturbances, which rapidly clear up when the surroundings are changed. These will be taken up under the separate discussions.

Organic neurological diseases which most frequently interfere with schooling are, epilepsy, cerebral diplegia, encephalitis, meningitis and lues of the central nervous system. There are a few minor conditions, also. These children may or may not have sub-normal mentalities, but all are fit candidates for special schools.

Psychoses usually result from organic disease, but some children do develop early functional schizophrenic or manic-depressive psychoses. The most important perhaps are the subnormal patients. We have recognized four groups, namely: Feeble minded, morons, imbeciles and idiots.

This grouping is based on the mental age of the patient. The first group contains those who are, mentally, two or

three years below the chronological age; the second are those who reach adult life with a mental age of twelve.

Imbeciles reach six, while idiots never go beyond two years. These names and classifications are unimportant from a practical standpoint. The cause of this slowness of mentality is important. There are two types—the organic and the idiopathic. The idiopathic are those cases which are apparently congenital in which the children progress, apparently normally, for a few years and then begin to stick. They progress very slowly from this point and, in regular schools, may even retrograde; they develop behavior problems and sometimes become unmanageable. The other group falls under the organic disease.

The plan of training these children in special schools consists of careful progress and supervision, so that all the capabilities of the child are brought forth. If progress is slow, the child is sure to learn more than if he is hurried. He begins to enjoy his work and takes pride in it. When the end of the mental capacity is reached manual work and training are instituted, so that the child may learn as much coordination as possible. In this way, he may be able to contribute to his own support and many of the cases become self-supporting because of this training. If self-support is unnecessary then the child may learn to amuse himself and enjoy his blighted life to the fullest extent. But probably the most important result of the special school idea is the removal of friction. The child soon learns that no more is expected of him than he is capable of accomplishing. He is not constantly seeing normal children surpass him in school work and games, and so he soon loses his inferiority feeling and secondary behavior problems disappear. The subnormal child is a good child whenever his surroundings do not irritate him and produce the inferiority feeling.

The behavior child is a separate problem. This type does not have a true nervous or mental disease, although behavior problems usually develop in these conditions. In these cases there is mal-

adjustment in the home or among the playmates, so that the child is insecure and he becomes unruly in order to counteract this feeling of insecurity. This child must be taken from his home and placed in entirely new surroundings, where he can readjust his thoughts and himself, and gradually outgrow tendencies that may eventually lead to juvenile delinquency and even to major crime. Occasionally they can be treated in the home with psychotherapy applied to both child and parents, but unfortunately, this is usually unsatisfactory. This is well illustrated in the following case:

L. H.: Age, eleven. Came from a fatherless home where a very determined mother tried to dominate every act of the child. This was a defense reaction on the part of the mother as she, herself, was insecure and attempted to satisfy her feelings by domineering the children. The child, in all outside relations, had an apparently ideal social adjustment. She was industrious, neat, courteous and generous. But in the home she was constantly in difficulties with the rest of the group, and finally was placed in a boarding home where she became thoroughly adjusted. She returned home and the same conflict arose again. She was placed under our care, away from home, and then was sent to a summer camp where she was well satisfied and made another adjustment. However, she returned home and in a few months the old conflicts returned and, at the age of fourteen, became "unmanageable." Her school work suffered and her friends began to desert her, and these conditions aggravated each other until she became a truant and was well under way to juvenile delinquency. During this latest period the mother decided that the trained workers and doctors were incompetent; would not listen to any advice, took the child from the public school and we lost all track of her. However, the outcome is determined. She will never respond to punishment and, as shown by the times she was removed from the home, her only hope of life adjustment is complete separation from the family group. On all these occasions she



was normal, but when she went home her old conflicts returned, which were detrimental to herself and to the whole group. However, the mother would not consent to complete separation, so the child's personality will be wrecked by a mother's selfishness. Had the child been placed in a boarding school for several years, instead of short intervals, she would have developed into normal womanhood.

Organic neurological diseases handicap a great number of our children. Epilepsy and congenital syphilis are the worst offenders, with congenital paralysis and encephalitis following close behind. Epilepsy is the most tragic disease with which the medical profession has to deal. One of two things happens. The child may retain all of his faculties—being perfectly normal between fits—but, because of the periodic spasmodic attacks, he is unable to take his proper place in society. Nothing is so harmful to a strong, ambitious individual as inability to hold a job because of the recurring convulsions. On the other hand, most of the patients develop mental deterioration or psychoses. The minds of the last group slowly waste away, as the body of an uncontrolled tubercular patient, and until recently nothing could be done about it. Both classes of patients suffer from behavior disturbances.

The special school with medical supervision is the only hope for these patients. Fay has recently devised a rational treatment of epilepsy, which does the thing that sedative drugs would never do, namely, save the minds of the patients as well as stop the attacks. When we can combine medical treatment with proper school training, in a restful, non-irritating environment, then we have the ideal surroundings for the juvenile epileptic. A case of mine, recently published in the Oklahoma State Medical Journal, illustrates this point.

H. B.: Age nine, had had attacks for six years. She had received all the medical treatments, as prescribed by the medical profession, with no response. She was placed in my care, an encephalogram performed, which showed that the brain was markedly atrophic. Her intel-

ligence quotient had dropped from 65 to 33 in two years, showing what happens to the mentality of these patients. Her fluids were restricted, her attacks stopped, and the intelligence quotient began to slowly rise. Her school work began to interest her, and, at the present time, she is making as good an adjustment as can be expected in a case that was neglected for four years.

Congenital syphilis produces a vast number of nervous conditions in children. In addition to tabes and paresis, epileptiform seizures, behavior disturbances, paralysis and mental deterioration all occur. These conditions all respond well to treatment, with the exception of juvenile paresis. The combination of training and medical treatment—closely co-operating—give us some of our most gratifying results. Dennie, in some unpublished work, has found that many behavior disturbances in luetic children which have no apparent home or school background, respond well to anti-luetic treatment, even though the Wassermann is negative. The juvenile paretics, at times, respond to proper treatment as shown by the following case:

E. S.: Age eight, was brought to me with a rather advanced case. The family refused malarial treatment, so he was given the usual routine of arsenicals and mercury and, for almost a year, improved slowly, but surely. He then had a series of epileptiform seizures from which he promptly recovered, under glucose therapy. He was then given diathermy treatment and has started to improve again. The mental status is much better and he is responding to school training very well. This case illustrates well the advantages of the special school, as medical treatment can be given without interrupting the schooling.

Encephalitis not only produces the rigidity syndrome in children, but it may, in other cases, produce personality changes. A normal, healthy-thinking child changes his whole thought mechanism; he begins to lie, steal, fight, and exhibit abnormal sex behavior; he will not attend the regular school nor do any of his work. These patients are our most trying problem. They do not respond to

medical treatment, as do the Parkinsonian cases, but can only be helped by careful school training. This training is vital. Left to themselves they form the most dangerous portion of juvenile delinquents, as they have no moral sense, nor do they have any conception of the consequences of their acts. But, under careful training, they do respond splendidly, at times, and may be returned to society. This is well illustrated by the following case:

A. C.: Age nine, a perfectly normal child; contracted encephalitis, and had a complete personality change. He became lazy, stubborn, and subject to fits of violent temper. He was placed under careful supervision and his personality was gradually remolded. While he became cross, at times, he never lost his temper; his school work improved and he soon caught up with his class. He assisted around the school room and, where before he was antagonistic, he became pliable. The results were most gratifying.

Cerebral diplegia, (Little's disease) meningitis sequelae and brain injuries present similar problems. In all of these cases, the symptoms result from paralysis of some function—motor or sensory. The children may or may not have deficient mentalities, but probably will. These cases need special training, both intellectual and for correction of their physical defects. The mental training is the same as that for other types of subnormal mentalities. The physical training consists of correcting the functions of the affected part. This problem is medical and orthopedic, and needs no discussion at this time. The following case illustrates the results that may be obtained, even in the most hopeless cases.

M. D.: Age ten, was taken to a school after every measure had been tried. He was given up as hopeless. He could not dress or feed himself, or talk, and required the attention of an infant. After several years, he learned to dress and care for all bodily wants, could talk understandingly, and made considerable progress in basket and rug weaving. He became anxious to learn and assisted the staff at every opportunity.

Psychoses, as we have pointed out, are nearly always organic, except the primary behavior problems. However, when functional psychoses do develop, these children should have every opportunity to progress in their schooling. School work—carefully supervised—will do more to alleviate psychotic manifestations than any other agency. But every psychotic patient should have a thorough neurological study so that organic disease may be ruled out, because the earlier rational treatment is instituted the better results may be obtained.

#### SUMMARY

There always will be children who are different from the rest. These unfortunates must not be neglected, but must be helped whenever possible. The public and private schools for normal children cannot fill this need, because the teachers are too busy to devote proper attention to the individual problem, and the other children do not care to associate with them. This causes friction, which the different child expresses by behavior disturbances, and inferiority feelings develop. Thus, the little that the child has may be more severely handicapped. The special school is answering this problem by giving individual attention and removing the friction set up by association with normal children in the school, the home and social groups.

Their progress is usually surprising and no child must ever be considered hopeless.

Medical supervision is of equal importance; the occasional visit will not suffice.

As splendid as is the work of our public schools of this kind they lack the close medical care by trained men that they should have. Many of the cases that enter these schools are never studied carefully enough, because the men who try to do this work do not have the time to give. The medical supervision must be constant and continuous, and every child must receive a thorough medical study, so that the school training may be properly gauged, and all curable infirmities diagnosed and cured as soon as possible.

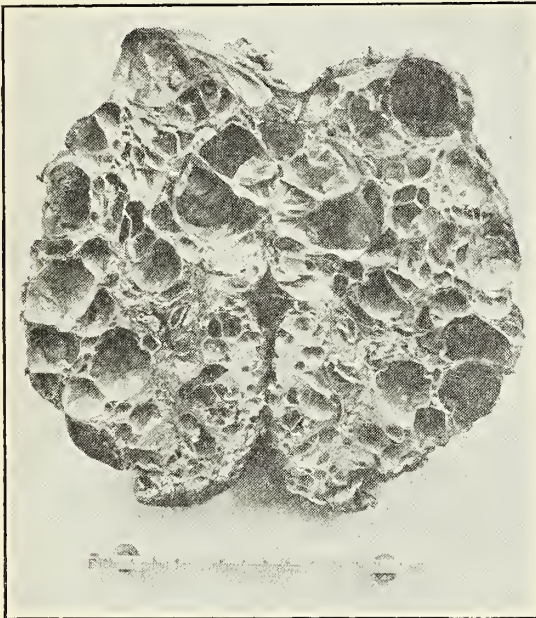


### Congenital Polycystic Kidney Disease

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Congenital polycystic kidney disease is relatively common, and for this reason clinicians should consider this condition in every case of nephritis that they may treat. For the reason that the disease may lie dormant for a number of years, the symptoms and chain of events should be well understood when they appear.



Polycystic Kidney

The etiology of polycystic kidneys is not exactly understood, however the consensus of opinion is that it is due to an embryological deformity. This comes about from a malunion of the convoluted tubules and collecting tubules, the former being derived from the metanephros and the latter from the Wolffian ducts. With the beginning of secretory activity of the glomerulus and kidney tubule a cyst is formed. It is probable that neoplastic formation takes place subsequent to the embryonic malformation. This question is not settled, as several men have shown that there is a direct continuity between the cysts and collecting tubules. The tumor is present at birth but may wait till middle adult life to grow.

The disease may affect only one kid-

ney but no one can ever be sure about this fact in their clinical diagnosis. Unilateral polycystic disease is uncommon, and until proven otherwise the condition must be considered bilateral. Washburn reports a case of bilateral polycystic kidneys with two separate pelves and double ureters to each kidney. Wakely on the other hand reports a case of an unilateral polycystic kidney in a child one year and eight months old.

It has been emphasized by many investigators that this disease has a distinct hereditary characteristic. Fuller reports an interesting series of polycystic kidney disease in a certain family. During four generations there were twenty-seven individuals and out of this number nine were proven to have had polycystic kidney disease.

The symptomatology of this disease may be quite confusing and there is really no pathognomonic sign that can be relied upon. Except for the attacks of pain and hematuria the entire sequence of events is indistinguishable from that which is observed in patients suffering from primary arteriolar sclerosis (malignant hypertension or smaller granular kidney) and in patients in the late stages of chronic glomerular nephritis. The earliest disturbance is usually polyuria, nocturia, and examination of the urine shows a low and fixed specific gravity. Eventually nitrogenous constituents increase in the blood and a terminal picture of uraemia develops.

Sieber describes three different clinical courses that the disease may assume. First, the uraemic form, in which the onset is insidious and terminates in death in from eight to twenty days; second, the Bright's form, in which the symptoms are those of chronic nephritis with cardiovascular changes, edema and albuminuria. The course may extend over twenty years. Third, the surgical form, in which there may be considerable pain and hematuria. The attacks occur in exacerbations as in renal colic followed by remissions. The duration in this type may be up to three years, death being due to uraemia.

It is to be emphasized that the disease, though present from birth, may be dor-

ment until adult life, or perhaps until the late decades. There may be no symptoms in those whose kidneys are badly damaged by this disease. In this manner the condition persists unrecognized.

The pain and hematuria is due to rupture of vessels of various sizes which lie in the walls of the cysts. Rupture of these over stretched arteries into a cyst cavity may be produced by trauma or as a result of arterial hypertension and local arteriosclerotic changes in the vessel walls. Sometimes, during adult life as early as the third decade or as late as the sixth, sclerosis of the arterioles and small arteries of the kidney and perhaps other organs makes its appearance. This pathological process begins to manifest itself clinically in an arterial hypertension and cardiac hypertrophy. For this reason it is not uncommon to find hypertension and cardiac disease in those adults with polycystic kidney disease.

There are several findings in the examination of the patient with this disease that must be considered. These are irregular kidney tumor, pain associated with intermittent hematuria, inconstant albuminuria, urine with fixed low specific gravity and constant low grade pyuria. Hematuria occurs almost invariably at some time in the course of the disease and may be the first and only symptom. From these findings a cystoscopic examination is certainly indicated. At this time a differential kidney function test may be made and the study of the pyelogram is usually diagnostic. The kidney will be found enlarged in all directions. The effect on the pelvis is not marked in the longitudinal direction, while the calices at the outer pole are spread apart. The characteristic lengthening of the pelvis without any dilatation is pathognomonic.

Once the condition is suspected the diagnosis is not difficult to make. The course may be followed by kidney function tests, urinalysis and blood chemistry. Clinical uraemia, however, is not dependent upon the quantity of nitrogen products in the blood. The patients develop uraemia in direct proportion to the microscopic kidney damage.

To follow the courses pointed out by

Sieber one may gain a fairly accurate estimate of the prognosis in this disease.

There is no treatment for the basic disease. Surgery has not proved to be of any benefit.

The following case is presented as it shows some very important clinical observations which are fairly typical and the pathological anatomy is interesting both from the standpoint of the kidney and the various complications found.

H. B.: white male, 49 years of age. The patient was admitted to the hospital with paralysis of the left arm and leg, and in a semi-comatose condition. A history was obtained that a sister died of cystic kidney disease and one brother has had hypertension.

In August, 1930, he had a progressive painless jaundice which incapacitated him a great deal until October. During the last four weeks he complained of progressive weakness and pain in the left arm. During that time he became listless and developed a retention of urine. His urine was noted to contain some blood. At no time did he complain of pain in the kidney region. While under observation of his physician he had a blood pressure of 204 systolic and 140 diastolic.

Essential findings upon examination after admission to hospital were that his pupils were irregular and reacted sluggishly to light. The left side of his face showed convulsive twitchings from time to time. The cardiac dullness was markedly increased to the left. The patient had a palpable thrill over the apex and the heart sounds were reported as being of a peculiar character. The left kidney was noted for the first time to be greatly enlarged. The blood pressure was 150 systolic and 95 diastolic. Temperature 99.8 degrees. Pulse 88 regular. Respiration 16.

During the following twenty-four hours after admission the patient had several convulsive seizures, particularly involving the left side of his body. The patient died during one of these attacks.

Diagnosis: Right intracranial hemorrhage. Hypernephroma.

Autopsy findings were as follows: The body was that of a white male and



weighing about two hundred pounds. There were two large masses easily palpable in both upper quadrants of the abdomen. There was no peripheral edema.

Over the pericardium of the heart was an acute fibrinous exudate. This was quite extensive and was tending to obliterate the pericardial cavity. It was quite friable and could be removed with ease. The right side of the heart was flabby, whereas the left was firm in consistency. The right side was dilated and there was a distinct hypertrophy of the myocardium throughout.

The spleen gave the picture both grossly and microscopically of an acute splenic tumor characterized by the pulp being congested and scraping easily.

When the abdomen was opened two large multiple cystic kidney masses were noted pushing up the diaphragm and displacing all the abdominal contents. These masses were somewhat adherent to the adjacent intestinal loops. The ureters and bladder were normal. The prostate was not markedly enlarged.

The kidneys weighed 3100 grams. The original kidney tissue had been replaced by multiple cysts measuring from 2 mm. to 4 cm. in diameter. They were thin walled and gray in appearance. The lining of the cysts were quite thin and smooth. Some of the cysts contained clear straw colored or brown exudate while others contained dark red blood. The pelvis was elongated but not dilated, and contained some semipurulent appearing material. No normal kidney tissue remained. Upon microscopic study the cysts were found lined by low and high epithelium and in some of the cysts it was quite flattened. The cysts contained occasional desquamated epithelial cells and others contained considerable blood and blood clots which had become infected. The stroma appeared quite loose and was made up principally of fibrous tissue. The glomeruli were quite distorted, and appeared to be undergoing hyaline degeneration. Here and there in the stroma were clusters of lymphoid cells and occasional polymorphs were seen. There was considerable hemorrhage into the stroma.

The brain showed an area of softening and hemorrhage in the right mid precentral gyrus measuring about 2 cm. in diameter which was quite well circumscribed. The cerebral vessels were somewhat tortuous and thickened. Microscopic examination showed a well advanced thrombosis in the vessels in the neighborhood of the hemorrhage. This was associated with fairly extensive encephalomalacia (softening of the brain) which at this time was undergoing degeneration. The hemorrhage was not very recent as it showed considerable healing to have taken place.

This case illustrates several very interesting features that are worth comment. This is an advanced case of polycystic kidney disease with a history of the disease in the family. He had fairly well advanced cardiovascular disease. He showed symptoms of the disease long enough for the case to have been studied properly and a correct diagnosis arrived at. It ran the course of chronic glomerular nephritis. The symptoms did not occur until late in adult life. The patient had hematuria, and there were two large easily palpable kidney masses. The termination of this case is fairly typical of the chronic nephritis.

A pericarditis is not an uncommon complication and is due to two processes; namely, uraemia and trauma. It is explained as being due to the constant trauma to the pericardium brought about by the beating of the large hypertrophied heart against the sternum, combined with the toxic effects of the uraemia on the pericardium.

The thrombosis, encephalomalacia and brain hemorrhage are interesting and also fairly frequent complications. The sequence was probably in the order named; the encephalomalacia being due to the thrombosis and the hemorrhage being superimposed on the softening.

Due to the fact that the symptoms of the disease were so manifest the diagnosis should have been easy. A cystoscopic examination is indicated in any case of bilaterally enlarged kidneys with hematuria or with hematuria alone. A

pyelogram would have shown the characteristic lesion.

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### Rupture of the Uterus Following the Use of High Forceps

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In reviewing the literature on this subject there is a marked paucity of articles. There has been considerable written on rupture of the uterus but very little on rupture following the use of forceps. Traumatic rupture includes a variety of causes and Hirst says, "Undoubtedly unskilful use of instruments, manual procedures, and failure to recognize dystocia are responsible for most ruptures." DeLee states that, "Spontaneous rupture is excessively rare and trauma practically always precedes it."

J. W. Long says of Hirst's dictum, "that, 'That accident is rightly regarded as a reproach to the physician in whose hands it occurs', requires qualification and that there are many mitigating circumstances." Following certain infections of the uterus the walls may become extremely friable. This condition may follow some severe illness or infection. The Germans call a softening of this kind, "dessicans myositis." When this condition obtains any manipulation such as version or high forceps can easily cause a rupture allowing intestines or omentum to slip through. Treatment of these cases is surgical and they should be regarded as more or less infected. Whether or not the uterus should be sutured or removed depends upon the condition of the patient and the amount of infection probable. Certainly a hysterectomy should not be done on a patient in extreme shock. A rapid suturing of the uterus with a tube drain is the method of choice in this condition.

J. C. Hirst<sup>1</sup> says that rupture of the lower uterine segment is not uncommon and usually occurs anteriorly under the bladder. In the case about to be reported

the laceration was in the posterior aspect.

Greenhill reports a rupture of the uterus following the use of Kielland forceps in which the application was accomplished with great difficulty. Addler also reports a case of incomplete rupture which occurred after craniotomy on a baby whose delivery had been attempted with the Kielland forceps. Patterson<sup>2</sup> reports a case in which there was a prolapse of a loop of the intestines and free arterial hemorrhage from the parametrium, the tear extending upwards and involving the uterus for a distance of four inches. He succeeded in suturing the cervix and the lower part of the uterus through the vagina. The torn edge of the peritoneum and vaginal wall were approximated with a purse string suture. A tube drain was inserted into Douglas' pouch. The patient recovered.

Von Franque<sup>3</sup> states that high forceps can cause tragic results and mentions four cases of his own observation, but concludes that with indications carefully made they may save the life of many a child provided the necessary precautions are taken.

#### HISTORY

The patient was delivered of her first child four hours ago by her family physician. The labor was prolonged and was terminated by the application of high forceps. The physician states that the delivery was very difficult and the baby was born dead.

Following the manual delivery of the placenta the doctor and his assistant noticed a mass of tissue protruding from the vagina which, upon examination, proved to be omentum. The patient was immediately transported forty miles to the Newman Memorial Hospital and arrived in severe shock and almost unconscious. She was immediately given treatment in the form of intravenous saline and glucose and electric blanket.

#### PHYSICAL FINDINGS

The patient is in shock. The skin is moist, cold and pale. The pulse is rapid and of poor volume. Chest is normal. Heart sounds are rapid and faint. The abdomen is flat, the uterus is easily palpated and is about the size of a large



grapefruit. There is no rigidity of the abdominal muscles.

#### VAGINAL

There is a severe laceration of the perineum but not complete. There is no sign of the omentum as reported by the family physician but no attempt was made to examine the interior of the uterus for fear of carrying in more infection. Relying on the judgment of the family physician that he knew omentum when he saw it abdominal section was decided upon.

#### OPERATION

The abdomen was opened in the midline from the pubis to the umbilicus. There was a large amount of free blood in the abdominal cavity. There was a laceration in the uterus posteriorly in the midline about four inches long through which the free end of the omentum disappeared. The blood clots were removed and the free end of the omentum was pulled from the tear in the uterus. The part of the omentum which had been pulled down into the vagina was clamped off and carefully removed so as to lessen the amount of contamination. The clamped end was sutured over in the usual manner and the clamp removed.

The laceration in the uterus was sutured in two layers with interrupted chromic catgut and was done hurriedly because of the patient's poor condition. The abdomen was closed in the usual manner with a tube drain in the cul-de-sac.

The patient recovered after a stormy convalescence. Twenty months following her operation the patient gave birth to a living child. She had a normal delivery.

My reason for making this report is that I believe there are many cases of rupture of the uterus following the use of high forceps that are not diagnosed. It is probable that when death occurs in these cases the cause is thought to be due either to shock and hemorrhage or the combination of shock and puerperal infection. It is quite conceivable that with a small rent in the uterus or vagina a portion of intestine or omentum could easily become contaminated and peritonitis result.

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#### TUBERCULOSIS ABSTRACTS

Adolescence is a period of strain. Youngsters who have, during the earlier years of childhood, been massively infected with tubercle bacilli are likely during the teen age period to develop the adult type of tuberculosis. It is during high school years that the destiny of many of these children is decided. This is reflected in the steep rise in the death rate curve during the late teens and early twenties. Walter L. Rathbun has, since 1923, made a systematic search for early tuberculosis, regardless of symptoms, by means of the tuberculin test and the *x*-ray. He has recently completed the task of examining practically every high school pupil in Chautauqua County, New York; namely, 7,171 children. His experiences are recorded in a special publication, from which these abstracts are derived.

#### TUBERCULOSIS AMONG HIGH SCHOOL STUDENTS

Examinations of school children for early tuberculosis began in Chautauqua County, New York, in 1923 by sending to local clinic centers (a) pupils physically below par, (b) those who had symptoms referable to tuberculosis and (c) those who have been exposed to the disease. The results of the first year's effort were enlightening, but since facilities were limited, it was decided the next year to examine only the high school groups because these children leave school first. Each high school student was given a chest examination without reference to family history, height-weight ratio, or symptoms. The results justified the procedure as many cases of tuberculosis were found among those in whom it was least suspected and who were apparently perfectly healthy.

Of the students so examined, three groups were then *x*-rayed: (a) those with suggestive signs of pulmonary tuberculosis; (b) those in actual contact with a case of tuberculosis; (c) those with a history of previous or present symptoms

referable to tuberculosis. All such children were transported to Newton Memorial Hospital, where they were *x*-rayed. This procedure continued during 1924 and 1925, when the plan was broadened by carrying the diagnostic work directly into the schools.

#### EXAMINATIONS MADE IN SCHOOLS

The Chautauqua County Tuberculosis Association furnished funds to purchase a portable apparatus and *x*-ray films which made it possible to do the work in the school buildings. Incidentally, while it is true that the portable *x*-ray machine has its shortcomings, it is capable when properly handled of revealing lesions of the childhood and the adult type. The few cases in which more detail is needed may be *x*-rayed with a high-powered machine. The utility of the portable apparatus is a distinct advantage, and having the examinations made in the school arouses interest among school people. Stereoscopic sets of pictures were made routinely.

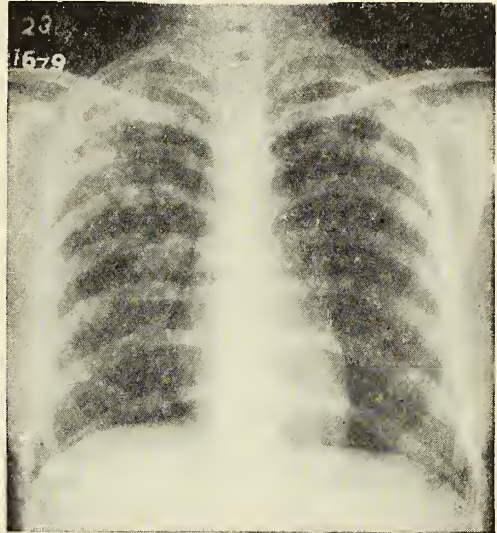
In 1926, the mode of procedure was again modified. Students were taken from the study halls and *x*-rayed, and only those with definite or suspicious signs were given a physical examination. This speeded up the work and also increased the percentage of positive cases. The tuberculin test was not insisted upon as a routine measure at that time because public opinion was not favorable to its use, whereas *x*-ray examinations were heartily approved.

In 1927, the intracutaneous tuberculin test was introduced as the first procedure in diagnosis. A specially trained nurse made the test and read the reaction, thus saving valuable time of the physician. It was necessary to secure the consent of parents to make the test; hence, the percentage tested was reduced to about 50 per cent. Positive reactors only were *x*-rayed.

#### INTIMATE CONTACT IMPORTANT FACTOR

These studies indicated that tuberculous disease of the lungs and tracheobronchial lymph nodes results from prolonged and intimate, rather than casual, exposure to tubercle bacilli. Intimate exposure most commonly takes place in the

home. It was found that the percentage of positive reactors was greater among children living in the city of Jamestown (44 per cent) than among similar groups in the villages (25 per cent) but that the incidence of tuberculous disease of the childhood type was about the same in



Mottling in right upper and upper part of lower lobe, cavities in right upper, scattered mottling throughout upper two-thirds of left upper lobe with cavity near apex. Calcified lymph node above sternal end of left third rib, indicating presence of childhood type lesion.

Girl, 15 years old, very active in scholastic, social, and athletic affairs. Denied symptoms until questioned closely. Diagnosis made during routine school *x*-ray examination.

rural and urban areas. Apparently, while casual contact (which is more common in cities) may be the starting point of an infection as revealed by the tuberculin test, it is incapable of causing demonstrable disease in most cases. Intimate contact with a sputum positive case of pulmonary tuberculosis is the usual cause of the disease. In 54 per cent of the families of tuberculous children, a parent had either died of the disease or had pulmonary tuberculosis at the time. In 17 per cent of the families, there was a parent with suspicious signs of tuberculosis. In some cases, the "spreaders" were older siblings, in one, a nurse-maid, and in another, a boarder.

#### RESULTS OF STUDY

During the past seven years, 30,000 pupils, 7,171 of whom were of high school age, have been examined, with the following results:



	Number	Per cent
Negative to tuberculin test.....	570	7.9
Negative on x-ray .....	5676	79.2
Children requiring observation...	538	7.5
Childhood type tuberculosis .....	250	3.5
Suspect adult type tuberculosis..	50	.7
Adult type tuberculosis .....	60	.84
Miscellaneous .....	27	.36
	7171	100.

Cases of childhood tuberculosis were 15 per cent higher for females than for males, while the morbidity for the adult type was 43 per cent higher among females than among males.

Many of the arrested cases continued school work but were given eight weeks' treatment in a high school health camp located on the grounds of the hospital. During the past two years, a high school has been conducted for students under treatment in the hospital. Local school authorities are well satisfied with the experiment. For ambulatory cases and some bed cases, school work is the most profitable kind of occupational therapy.

#### PROTECTING THE STUDENTS' HEALTH

The tendency in modern schools is to push the students to the limit of their capacities. Healthy children can stand the pace, but not those who are below par physically. Therefore, those with physical disabilities, real or potential, must be searched for and protected from overwork. Similarly, sports and competitive athletics must be curtailed for the physically handicapped. Rough handling and excitement are heavy drains on the body reserve and frequently precipitate a breakdown. School authorities in Chautauqua County co-operated admirably in protecting those who needed protection.

The public schools are logical centers for the dissemination of medical knowledge about tuberculosis, just as they serve as convenient units for discovering cases. Every student should be examined before graduating and certainly before working papers are granted.

Of course, no child with positive sputum should be allowed to attend school lest he infect his fellows.

"Every available resource that can be spared should be devoted to the public school field, for in the control of tuberculosis our hope of success in the years

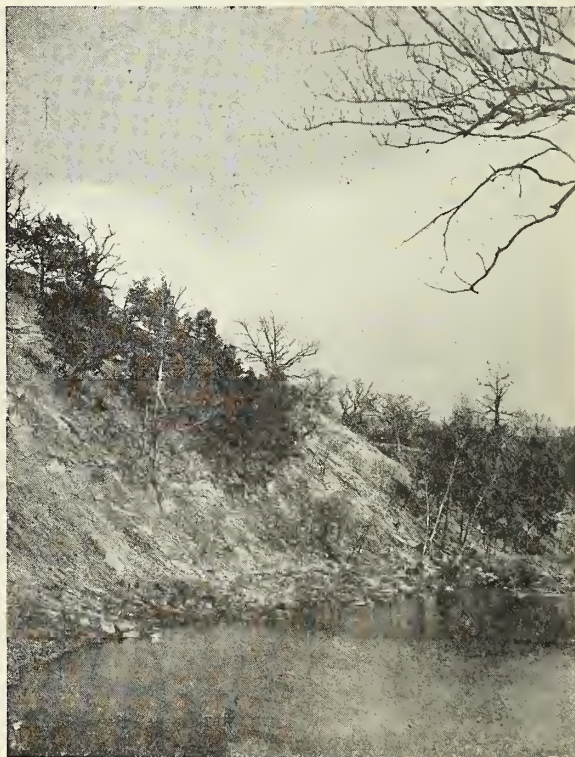
to come rests largely upon the care of the youths of today."—*Health in High Schools, Walter L. Rathbun, Natl. Tuberc. Assn.*

#### Your Convention City for 1931

FRED SEATON

"Manhattan—'the convention city of Kansas'." That's the way Kansans speak of this Kansas municipality nestled in the lap of four ranges of hills, shaded by thousands of beautiful trees and encircled on all four sides by winding streams. And so it is little wonder that after they have seen Manhattan, they speak of it as "Manhatt—'the convention city beautiful'."

The many conventions and the visitors they consequently attract have served to emphasize municipal pride and this has found an outlet in determined and extended efforts to carry on city beautification where nature left off. Manhattan was



Wildcat Creek, Sunset Park, Manhattan—Winter Scene

truly a beautiful city site to begin with, thanks to nature's lavishness, and the municipality has been careful that its



growth has been a healthy and attractive one.

Three large parks, two public and one privately owned but publicly conducted, are the keynote to the city improvements. They are all modernly equipped with comfort facilities and one of them has modern playground equipment and one of the largest municipal swimming pools in the state as well. This park is located almost in the center of the city. Poyntz Avenue, the main street of Manhattan, leads up to the south side of it. The other public park is located to the west of the city on the hillside and is especially equipped for picnics and outdoor meetings.

When a visitor drives up Manhattan's 45 miles of paved streets, he is impressed with the high-peaked arches of trees which shade the streets, all serving to impress the arboreal beauty of the city on his mind.

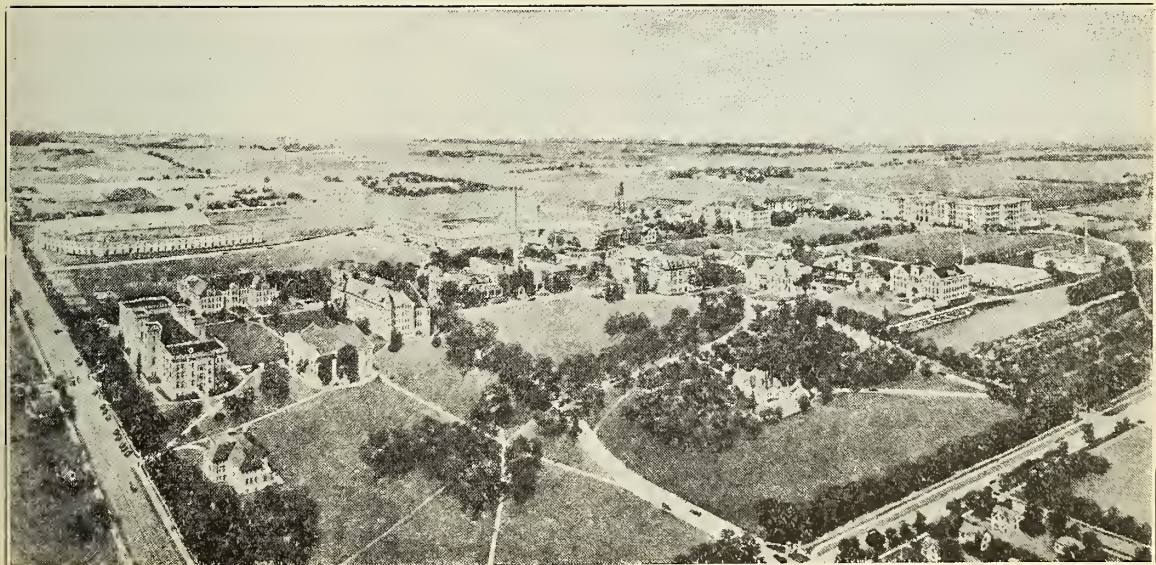
The Kansas State College of Agriculture and Applied Sciences, with an enrollment of 3,000 students, is spread over a hillside to the north and west of the city proper. Its campus, acknowledged as one of the most beautiful in the world, is thickly covered by trees of every family and species. Not only do all trees and decorative plants native to Kansas flourish there, but so many of those native to

other states have been introduced that the visitor is sure to find some of those native to his own heath growing there. The buildings of the college, uniformly constructed of native limestone quarried from the hills of Manhattan, make an attractive contrast to the green of the campus. Many of the buildings are literally covered by huge vines of ivy and other clinging plants.

Not only does Manhattan have these beauty spots for the entertainment of the visitor, but it has fostered the establishment of three large, modern theatres. Two of these are located in the downtown business district and one of them is in Aggieville, the name given to the business blocks which have grown up around the college campus. All of them are equipped with the most modern "talkie" equipment. A little theatre movement, in which both townspeople and students take part, presents its plays in the college auditorium.

Many fraternal lodges and three civic clubs are in existence in the city. The Masonic temple is one of the show places of Manhattan, the Elks are beginning the construction of their new home. The Rotary, Kiwanis, and Co-operative Clubs hold weekly meetings in the Wareham Hotel.

The hotel facilities are of the best. The





new Wareham Hotel located on Poyntz Avenue, and where most of your meetings will be held, has a large spacious ballroom and is located in the center of the business district. The Gillett Hotel,

priced hotel is located on the corner of Second and Poyntz and on Highway No. 40. The rooms are large and modern and we can adequately house the delegates who come to our city.

The United State Military Reservation of Fort Riley is situated about 18 miles southwest of Manhattan, Kansas, on the U. S. Highway No. 40S. It is at the point where the Republican and Smoky Hill Rivers unite to form the Kaw (Kansas) River.

Fort Riley was one of the outposts of the early days when the movement of pioneers surged slowly westward, and is closely linked with the development of the State of Kansas. It became a military post in 1852, at which time a Board of Officers was appointed "to select the location for a new post in the vicinity of the forks of the Kansas River." A camp was established on the present site of Fort Riley called Camp Center, because it was known to be very near the geographical center of the United States. Later, the post was named in honor of Major General Bennett Riley, a native of Virginia.

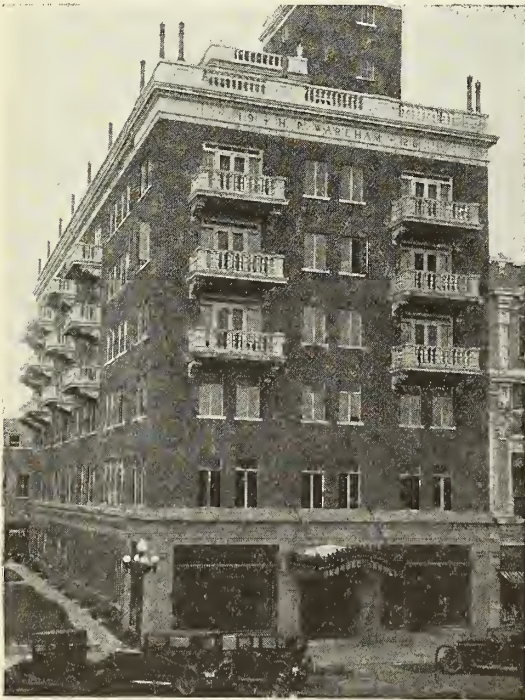
The post has been occupied continuously by military forces, principally cavalry, since its establishment. It has been the site of the United States Cavalry School for the past several years. Each year between 50 and 75 Regular Army cavalry officers take the school course of nine months duration. Generally there are student officers here from foreign armies. In addition, there is a three months' course held for cavalry officers of the national guard and organized reserve, from all over the country. Schools for bakers and cooks, for horse shoers and for saddlers are also maintained. A limited number of noncommissioned cavalry officers from the national guard and organized reserve pursue a six months' course of instruction each year. During the summer months units of the Kansas and Missouri National Guard train at the post, as do also certain units of the organized reserve and officers' training corps. In 1931 a citizens' military training camp will be held for colored candidates.

The following regular army troops are



Typical Residential Street

under the same management is located on the corner of Fourth and Houston Streets, directly across from the post office. The Baltimore, a more modern



Wareham Hotel, Manhattan



stationed at Fort Riley: Faculty and students, Academic Division; The Cavalry Board, 2nd Cavalry; 9th Cavalry; 13th Cavalry; Battery D, 18th Field Artillery; 1st Platoon, Troop A 9th Engineers; Detachments of the Air Corps, Quartermaster Corps, Medical Department, Ordnance Department, Finance Department and Chemical Warfare Service.

The population of the post on March 1, 1931, was 238 officers, warrant officers, and nurses, 2,059 enlisted men and 986 civilians.

The reservation comprises 19,446 acres of river valley and rolling prairie land, and is especially suited to cavalry and artillery training.

Other factors which prove of great attraction to visitors are the beautiful drives around the city. All of the roads leading into the city are either paved or

building which was the first capitol of the state. Scattered around Manhattan are many other sites of historical pioneer or Indian interest. On top the "K" hill, to the east of the city, is an Indian burying ground from which a number of relics have been recovered.

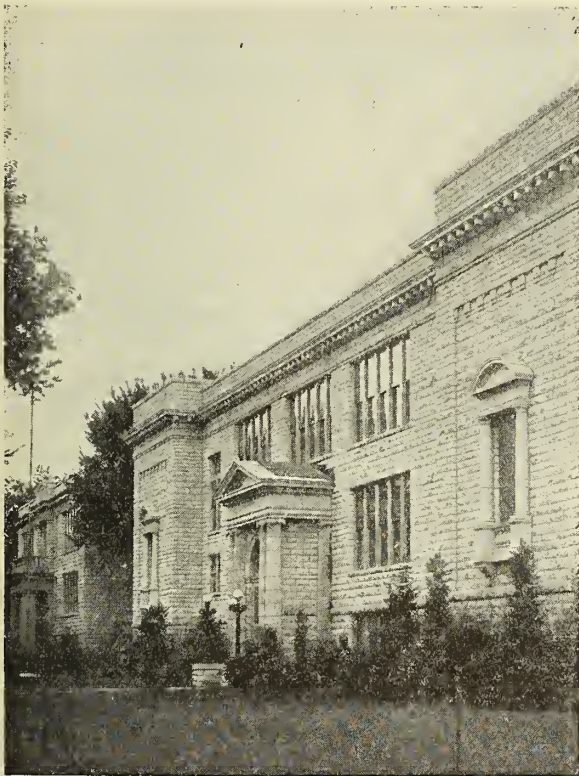
Manhattan is a convention city. And, as a convention city, it has adequately provided for the comfort and entertainment of its many welcome guests.

All general meetings, exhibits, presidents and secretaries, and delegates, in fact everything connected with the Association meeting will be in the Wareham Hotel. The spacious ballroom of this hotel will be used constantly during the three days. If an open meeting is held it will be held at the Wareham Theatre just two doors from the Wareham Hotel.

—R—

### Avertin

The Council on Pharmacy and Chemistry reports that Avertin was submitted for consideration in February of this year; that it recognizes the fact that the product presents certain desirable properties but that definite action concerning its recognition is postponed pending investigation of certain of its side actions now being conducted. For the information of the medical profession the Council submits a report concerning the present status of the drug. Avertin is tribrom-ethanol. It was introduced in Germany in 1926, to be used alone for rectal anesthesia, or to be supplemented by other narcotics, including morphine and ether. Later Avertin was offered in a solution, 1 cc. of which contains 1 Gm. of Avertin dissolved in amylene hydrate (tertiary amyl alcohol). This solution has been the subject of several hundred reports. After reviewing the reported advantages and disadvantages the Council concludes though the present evidence indicates that Avertin may prove valuable as a means of initiating narcosis but not for complete narcosis, the Council decided not to admit the drug to New and Nonofficial Remedies. (J.A.M.A., Nov. 8, '30.)



High School, Manhattan

sanded and consequently, all weather traffic is maintained. Just 8.9 miles west of Manhattan is Ogdensburg, the oldest incorporated town in the state of Kansas. A little farther west is the old stone



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - - Editor**

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ASSOCIATE EDITORS—L. W. SHANNON, L. B. SPAKE, P. S. MITCHELL, O. P. DAVIS, J. T. AXTELL, J. F. GSELL, CC. STILLMAN, ALFRED O'DONNELL, H. O. HARDESTY, I. B. PARKER, C. H. EWING, W. F. FEE.

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### THE ANNUAL MEETING

The annual meeting will be held at Manhattan, May 5, 6 and 7. Wednesday will be guest day and the program so far arranged for that day should be particularly attractive. Dr. E. W. Ryerson, Professor of Orthopedic Surgery, Northwestern University Medical School, will discuss two subjects, "The Operative Treatment of Infantile Paralysis" and "The Value of Unusually Early Operative Treatment in Congenital Hip Dislocations with Description of Method."

Dr. Arthur J. Cramp, Director of the Bureau of Investigation of the A.M.A., will talk to us about the work of this very important department of our organization.

Dr. H. S. Crosson, Professor of Clinical Gynecology in Washington University School of Medicine has not, at the time of writing this, announced his subject, but everyone may feel assured it will be both interesting and instructive.

Dr. E. Starr Judd of the Mayo Clinic at Rochester, Minn., and President-Elect of the A.M.A. will address the Society on "A Consideration of the Clinical Aspects of Surgical Lesions of the Upper Abdo-

men." There is no need to say anything more about this item on the program. A considerable number of the members are familiar with Dr. Judd's work.

The Society will be favored this year by the appearance on our program of Dr. Olin West, Secretary and General Manager of the American Medical Association. At this time it is impossible to give his subject, but no matter what he talks about you will like him.

Dr. Jennings C. Litzenberg, Professor of Obstetrics and Gynecology in the University of Minnesota Medical School, is also to appear on the program, but we have not yet learned what the subject of his lecture will be.

From these outlines it should be evident that the guest day will be worth going for, in fact it will be just too bad for those who can't possibly get there.

On Tuesday evening, May 5, there will be a public meeting in the Wareham Theater and Dr. Cramp will address the audience on "Patent Medicines and the Public."

We are assured that there will be ample hotel accommodations for a large attendance.

The program as completed to date appears in this number of the Journal.

### NON-RESIDENT PRACTITIONERS

Some time ago it was suggested in these columns that there should be a law requiring all those who practice the healing art in this state to register at some central registration office, preferably with the State Board of Health, and requiring that those who change locations should notify the registration office of such change before beginning to practice at the new location.

There are numerous reasons why such a law should be passed. Anyone who tries to keep track of a number of those who are licensed to practice in Kansas

will appreciate the convenience of such a plan of registration. However, some additional reasons have recently been brought to light in the birth and death returns being made. The secretary of the Board of Health reports that in January death reports were signed by eleven non-resident physicians, only one of whom was licensed to practice in this state. In February several more names were added to the list of those who signed death certificates but were not licensed in this state.

It is evident from these reports that a considerable number of the physicians in neighboring states, especially those living near the Kansas line are in the habit of practicing in this state without taking the trouble to secure a license from the Board of Registration and Examination. There is nothing in our medical practice act which exempts physicians in neighboring states from its provisions. There is perhaps some justification for extending courtesies to those who are located near the border with part of their legitimate territory in the adjoining state, but many of these men who sign death reports are located at considerable distances from the state line and their practice extends sometimes as much as twenty miles into Kansas territory. Their practice is not limited to consultations either, some of them have offices and hospital connections in the state.

These men are certainly not entitled to such courtesies, but having permitted others to practice in the state without license, they may question the basis upon which such courtesies are refused. It may be well to consider in this connection the legal status of those who are permitted to practice in the state without license, in the event that some dis-

satisfied patient may start proceedings against them for violation of the medical practice act.

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R

### CHIPS

The percutaneous method of Loewenstein for producing an active immunity against diphtheria in children seems to be meeting with success. In the January number of the *American Journal of Diseases of Children*, Abt and Feingold report their results with its use in sixty-two children of various ages, all giving a positive Schick test before beginning the administration. The antitoxin is contained in an ointment which is rubbed into the skin at weekly intervals. Of the children thus treated 70.9 per cent showed negative control Schick tests after variable periods. This corresponds very closely with the results from toxin-antitoxin where Schick tests were made before and after treatment. Seligman reported 71 per cent negative control Schick tests in 11,325 children who were given toxin-antitoxin.

Hypochromic anemia with achlorhydria is discussed by Waugh, of Montreal, in *Archives of Internal Medicine* for January. This is a form of anemia found in women, particularly those who have not reached the menopause. It does not produce the severe symptoms found in pernicious anemia but there is always weakness and lassitude. There may be little if any change in the blood count but in most cases there will be a low hemoglobin percentage. The usual therapeutic measures effective in other forms of anemia do not seem in these cases to increase the hemoglobin. There seems to be some doubt if the achlorhydria is primary or secondary to the anemia with the evidence favoring the primary role. There is usually a history of gastric disturbance. There is usually a low blood pressure, sometimes a faint systolic murmur. There is no evidence of splenic or glandular enlargement. There is rarely a history of excessive menstrual bleeding. Examination of the stools shows no evidence of loss of blood. Iron in combination with copper seems to have produced more favorable results



than liver therapy, iron and arsenic or iron alone.

It has always seems convenient to have something, even though just a name, upon which to put the blame for otherwise unexplainable deaths. Perhaps that is the reason for the ready reception of status lymphaticus or status thymicolymphaticus as pathologic entities. The theoretical background was plausible and lack of definite confirmative data was disregarded. Some five years ago the Medical Research Council and the Pathological Society of Great Britain and Ireland formed a joint committee for the investigation of status lymphaticus. It was the object of this committee to collect a large mass of material, from its analysis to establish "the standards of weight for age and proportion to body-weight of the normal thymus at all ages, and to investigate closely the precise cause of death in persons dying suddenly from unexplained or trivial causes where the only apparent abnormality was the presence of a large thymus."

Records in 710 cases were secured, but 30 of these were discarded on account of insufficient information. The results of this investigation indicate that there is no evidence that an abnormally large thymus indicates "status thymicolymphaticus" when no obvious cause of death is found at autopsy. In twenty-three cases in which death was attributed to anesthetics or shock there were only four with abnormally large thymus glands and in these the necropsy revealed sufficient pathology to account for the deaths. Why some people die and why some others do not die are problems still unsolved.

Much has been written about focal infection, much work has been done to establish the relations between foci of infection and various diseases. A very exhaustive review of the literature covering the work so far accomplished has been prepared by Joseph A. Pollia, M.D., and published in the February number of *The Journal of Dental Research* under the title "Newer Concepts of Focal Infection." Dr. Pollia stresses the

point that focal infection is not a predominating etiological factor, but it only one of many conditions that may affect health and has no greater influence than defective nutrition, exposure, fatigue, or emotional strain. His general conclusions are as follows:

"These studies tend to disprove the specific relationship between a focus of infection and a disease. Therefore, it is suggested that this doctrine of specificity be abandoned in favor of the broader concept that it is a basic influence affecting the whole body. That the benefits derived from the removal of foci or infection are not due to the elimination of a specific agency, as is believed, but to the introduction into the body of an autogenous substance, which produces the same effect as a foreign protein, is evidenced by the histamine reactions of Lewis; the rapidity of relief from the symptoms, sometimes said to occur within an hour; and the striking similarity not only between the diseases benefited by non-specific protein on the one hand and removal of foci on the other, but also in the percentages of the results themselves. Thus, the removal of all foci merely as a routine measure is not justified, because not all foci are active, and it is necessary to prove that they are actually the cause of the focal infection. Another point, rarely considered, is that every inflammation is associated with protective and regenerative activities, making it possible for a focus to undergo spontaneous cure. It must also be remembered that there are many hidden and inaccessible areas, the importance of which is never stressed because they are not in plain view, but which may be responsible for the trouble. Therefore, the removal of foci of infection should be carried on in proper relationship to the rest of the therapeutic program, and in accordance with definite and practical indications."

—R—

The highly unclad state of the African aborigines shown in the movie-exploration films gives us to wonder what they do with our old pants, etc., that are sent them from time to time.—*Arkansas Gazette*.

Father—"Why were you kept in at school?"

Son—"I didn't know where the Azores were."

Father—"Well, in the future just remember where you put things."—*The Gas Line*.

**Seventy-Third Annual Meeting Kansas Medical Society, Manhattan, Kansas Tuesday, Wednesday and Thursday, May 5th, 6th and 7th, 1931**

PROGRAM

"Address of Welcome"—Dr. J. D. Colt, Sr., President Riley County Medical Society.

"Medical Organization, Its Importance"—Dr. E. C. Duncan, President, Fredonia.

"Some Gastro-Intestinal Conditions Observed by the General Practitioners"—Dr. J. W. Helton, Colony.

Discussion opened by Dr. W. K. Johnson, Garnett.

"The Clinical Application and Interpretation of Blood Chemistry"—Dr. John L. Lattimore, Topeka.

Discussion opened by Dr. E. S. Edgerton, Wichita.

"Prognosis Versus Treatment in Pernicious Anemia"—Dr. E. A. Miner, Independence.

Discussion opened by Dr. W. S. Hudiburg and Dr. G. C. Bates, Independence.

"Rational Use of Radium"—Dr. G. W. Jones, Lawrence.

Discussion opened by Dr. W. O. Nelson, Lawrence.

"The Sinus Problem"—Dr. H. E. Marshall, Wichita.

Discussion opened by Dr. E. D. Carter, Wichita.

"Vitamins"—Dr. J. A. Wheeler, Newton.

Discussion opened by Dr. E. G. Padfield, Salina.

"Science, Art and Bunk in the Sacred Calling"—Dr. R. C. Hutcheson, Elk Falls.

Discussion opened by Dr. H. E. Haskins, Kingman.

"The Physician and the Community"—Dr. Fred Slayton, Wichita.

"The Present Medical Situation"—Dr. C. D. McKeown, Wichita.

Discussions opened by Dr. J. D. Clark, Wichita.

"Skull Fractures and Their Treatment from the Viewpoint of a Country Doctor"—Dr. B. H. Pope, Kingman.

Discussion opened by Dr. W. P. Callahan, Wichita.

"Tribromomethylalcohol (Avertin) as a Rectal Anesthetic"—Dr. Lewis W. Angle, Boylan Research Fellow, University of Kansas School of Medicine.

Discussion opened by Dr. Nelse Ockerblad, University of Kansas School of Medicine.

"The Present Status of Urinary Antiseptics"—Dr. A. D. Gray, Topeka.

Discussion opened by Dr. R. W. Hissem, Wichita.

"Painful Points and Problems"—Dr. Edward K. Lawrence, Hiawatha.

Discussion opened by Dr. L. B. Gloyne, Kansas City.

"Treatment of Postoperative Distention"—Dr. Thomas G. Orr, Mission Hills.

Discussion opened by Drs. H. L. and H. E. Snyder, Winfield.

"The Treatment of Acute Generalizing Peritonitis"—Dr. L. F. Barney, Kansas City.

Discussion opened by Dr. W. M. Mills, Topeka.

"Intestinal Diverticula"—Dr. Alfred O'Donnell, Ellsworth.

Discussion opened by Dr. H. R. Wahl, Kansas City.

"Some Anatomical Studies on Oblique Inguinal Hernia"—Dr. L. V. Hill, Kansas City.

Discussion opened by Dr. C. C. Nesselrode, Kansas City.

"Methods of Handling Patients Coming into the State Sanatorium for Tuberculosis"—Dr. C. F. Taylor, Norton.

Discussion opened by Dr. J. A. Fulton, Kansas City.

GUESTS

(a) "The Operative Treatment of Infantile Paralysis."

(b) "The Value of Unusually Early Operative Treatment in Congenital Hip Dislocation with Description of the Method."



Dr. E. W. Ryerson, Chicago, Professor Orthopedic Surgery, Northwestern University, Medical School.

"The Bureau of Investigation and Its Work."

Dr. Arthur J. Cramp, Chicago, Director, Bureau of Investigation, A.M.A.

"Practical Problems in the Treatment of Carcinoma of Cervix Uteri."

Dr. H. S. Crossen, St. Louis, Professor Clinical Gynecology, Washington University, School of Medicine.

"A Consideration of the Clinical Aspects of Surgical Lesions of the Upper Abdomen."

Dr. E. Starr Judd, Rochester, Minn., President-elect, American Medical Association.

"Some Important Problems."

Dr. Olin West, Chicago, Secretary and General Manager, Journal of American Medical Association.

"Preventable Invalidism Following Childbirth."

Dr. Jemmings C. Litzenberg, Minneapolis, Minn., Professor of Obstetrics and Gynecology, University of Minnesota, Medical School.

#### MOTION PICTURE

"Sub-total Abdominal Hysterectomy for Uterine Fibroids" (motion picture with sound)—Dr. H. O. Jones, Professor Gynecology, Northwestern University, Chicago.

#### GOLF TOURNAMENT

The annual tournament of the Kansas Medical Golf Association will be held at Manhattan, over the Country Club course, on May 4, the Monday preceding the meeting of the Kansas Medical Society. All physicians that are members of the State Medical Society are invited and urged to attend this tournament. Play will start at 10:00 a.m. and will continue through an afternoon round, followed by a dutch lunch at 7 o'clock. The night session will be featured by the awarding of prizes and entertainment will be furnished by the Manhattan physicians. If you contemplate attending, please notify Dr. J. F. Mathews of Manhattan, chairman of the committee on arrangements.

### Kansas Medical Auxiliary, Sixth Annual Meeting

Headquarters—Parlor 2nd Floor Wareham Hotel.

#### OFFICERS

President—Mrs. C. W. Reynolds, Holton. President-elect—Mrs. C. B. Van Horn, Topeka. Vice President—Mrs. J. T. Axtell, Newton. Secretary—Mrs. E. J. Noddruth, Wichita. Treasurer—Mrs. W. G. Emery, Liberal.

#### COUNCILLORS

Mrs. E. K. Lawrence, Hiawatha; Mrs. H. L. Kennedy, Ottawa; Mrs. C. B. Van Horn, Topeka; Mrs. H. L. Scales, Hutchinson; Mrs. H. P. Daniels, Wichita; Mrs. V. R. Parker, Natoma; Mrs. B. A. Higgins, Sylvan Grove; Mrs. A. C. Gulick, Goodland; Mrs. D. R. Stoner, Ellis; Mrs. R. J. Wheeler, Great Bend; Mrs. W. O. Thompson, Dodge City.

#### STANDING COMMITTEES

Organization—Mrs. J. B. Carter, Wilson. Entertainment—Mrs. P. G. Schoonhoven, Manhattan. Publicity—Mrs. Alfred O'Donnell, Ellsworth. Hygeia—Mrs. E. F. Clark, Belle Plains; Hygeia Extension—Mrs. E. A. Evans, Conway Springs. Public Relations—Mrs. C. W. Reynolds, Holton.

#### PROGRAM

Tuesday, May 5, 1931

Registration—Parlor, 2nd Floor, Wareham Hotel.

3:00 to 4:30 p.m.—Reception, Bungalow, Roof Garden, Wareham Hotel.

8:00 p.m.—Address by Dr. Arthur J. Cramp, Chicago, Wareham Theater.

Wednesday, May 6, 1931

10:00 a.m.—Meeting of Executive Board, Gillett Hotel.

1:00 p.m.—Luncheon and Bridge, Tickets 75c, Country Club.

8:00 p.m.—Auxiliary Meeting, Community House.

Thursday, May 7, 1931

10:00 a.m.—Visit to Kansas State College, Home Economics, Nursery School and Van Zile Hall.

1:00 p.m.—Horse Show, U. S. Cavalry, Fort Riley.

Transportation furnished, cars will leave Wareham Hotel, promptly at 1:00 p.m.

**DEATHS**

John M. Jennings, Wamego, aged 93, died suddenly January 20, 1931, in Warsaw, Indiana, of valvular heart disease. He graduated from the State University of Iowa College of Medicine in 1872. He was a Civil war veteran.

Joseph S. Leslie, Tribune, aged 68, died December 27, 1930, of pulmonary tuberculosis. He graduated from Barnes Medical College, St. Louis, in 1897.

Oliver P. Branson, Wichita, aged 76, died February 5, 1931, of heart disease. He graduated from American Medical College, St. Louis, in 1895.

Paul Hullhorst, Topeka, aged 64, died February 5, 1931. He graduated from the State University of Iowa College of Homeopathic Medicine in 1889.

Dr. Allen James Martin died at Ottawa, Kan., February 24, 1931, at the age of 99 years, 17 days. He received his license from the Kansas Eclectic Board July 7, 1879. Cause of death was uremia due to prostatic obstruction.

— R —  
**SOCIETIES**

The Bourbon County Medical Society met in regular session at the Library building, February 16, 1931, at 8 p. m. with Dr. R. Y. Strohm in charge.

The minutes of the last meeting were read and approved. The time of the meeting was then given to Dr. H. E. Marchbanks of Pittsburg who presented a very interesting and comprehensive paper on "Hypertension as a Symptom in Disease." His paper was well illustrated with a number of lantern slides. Interesting and profitable discussion of the paper were given by Drs. J. R. Newman, R. O. Crume and W. S. Gooch. Meeting adjourned.

R. L. GENCH, Secretary.

**FRANKLIN COUNTY SOCIETY**

Nineteen member met at the Nelson Hotel March 25, 1931 at 6:30 p.m. for dinner. Dr. J. M. McWharf read an eloquent paper on "Dominant Factors in a Physician's Life." At the business meeting which followed, a committee was appointed to work out the details

relative to the society co-operating with the State Board in the use of free toxin antitoxin. The organization of the staff of the new Ransom Memorial Hospital was begun. The President, Dr. W. L. Jacobus, Ottawa; Vice President, Dr. J. B. Davis, Ottawa, and Secretary, Dr. G. K. Janes, Williamsburg, were elected. This will constitute the Executive Committee and will formulate the Constitution and By-laws. The delegates and alternates to the state meeting were elected. Five members were appointed as an Advisory Committee to the Hospital Trustees. Meeting adjourned at 9:20 p.m.

HOBART K. B. ALLEBACH, Secretary.  
— R —

**Woman's Auxiliary to the American Medical Association Ninth Annual Meeting**

Philadelphia, June 8-12, 1931.

Headquarters, Bellevue-Stratford Roof Garden.

Registration hours, daily 9 a. m. to 5 p. m.

All meetings will begin precisely at the hour indicated. Please be prompt.

**PROGRAM**

Monday, June 8—

12:30 p. m. In honor of national presidents, 1922-1932, buffet luncheon, subscription—Roof Garden.

2:00 p. m. Three round tables, 35 min. each, 10 min. intermissions—Roof Garden.

Subjects—

1. Programs for county auxiliary meetings.

2. The technique and value of a committee on public relations.

3. History and archives.

6:30 p. m. Board dinner, subscription—Red Room.

7:30 p. m. Board meeting—Red Room  
Tuesday, June 9—

9:00 a. m. General meeting—Roof Garden.

12:30 p. m. Luncheon (Bellevue Special)—Roof Garden.

1:30 p. m. \*Bus trip to Valley Forge Tea in log cabin  
Hostesses, Berks, Chester, Delaware and Montgomery Co., Pa., Auxiliaries.

or



1:30 p. m. \*Boat trip on Delaware River, tea on board

Hostesses, Bucks Co., Pa., Burlington, Camden and Gloucester Co., N. J., Auxiliaries.

or

2:00 p. m. Visit to Historical Society of Pennsylvania, 1300 Locust Street  
Special Docent Services

Brief address by Dr. Charles W. Burr of Philadelphia: "The Daily Life of the Colonial Physician."

Special exhibitions on view throughout the convention.

8:00 p. m. General meeting of A.M.A.—Academy of Music.

10:00 p. m. Supper dance—Bellevue Ball Room

Hosts, The Philadelphia County Medical Society.

Wednesday, June 10—

9:00 a. m. General meeting and election—Roof Garden.

12:30 p. m. Auxiliary luncheon, subscription—Rose Garden

Guests and speakers from A.M.A.  
Music by courtesy of the Delaware State Auxiliary.

2:30 p. m. Bus trip through historic Philadelphia, Fairmount Park and Germantown

Hosts, The Philadelphia County Medical Society

Tea at "Stenton"

Hostesses, New Jersey State Auxiliary.

8:30-11 p. m. Auxiliary reception—University Museum

Hostesses, Pennsylvania State Auxiliary

Music—Special Docent Service.

Thursday, June 11—

9:00 a. m. Board meeting—Red Room

10:00 a. m. Meeting for all state and county treasurers—Roof Garden.

10:30 a. m. General round table—Roof Garden

Subject: "What Have I Gotten Out of the Convention?"

Opening of question and suggestion box.

12:00 m. Luncheon (Bellevue Special)—Roof Garden.

1:00 p. m. \*Bus trip, "Longwood"

Estate of Mr. and Mrs. Pierre S. duPont.

or

2:30 p. m. \*Visit to Fairmount and Rodin Museums

Special Docent Service.

9:00 p. m. President's ball—Benjamin Franklin Ball Room

Hosts, American Medical Association.

Friday, June 12—

9:30 a. m. †Bus trip to Atlantic City, including visit to Convention Hall, ride in wheel chair (1 hour)

Luncheon at the Claridge

Atlantic City Auxiliary in charge

Return at 5 p. m. or 10 p. m.

or

11:00 a. m. Trip through Wanamaker's with luncheon in Crystal Tea Room.

"AS YOU LIKE IT"

Daily from 9 a. m. to 5 p. m. arrangements may be made at this booth in the Roof Garden for golf, shopping, or any special trips desired, *e. g.* historic churches, Fairmount Park mansions, suburban gardens, etc.

All tickets and invitations must be procured in advance in the Bellevue Roof Garden. Only programs will be obtainable elsewhere.

WOMEN AT THE A.M.A. MEETING, PHILADELPHIA, JUNE 8-12, 1931

The Woman's Auxiliary to the American Medical Association has been placed in charge of all entertainment of women visitors, and began its labors on June 27, 1930, by engaging the whole Roof Garden of the Bellevue-Stratford Hotel for the period of the convention. All women's activities will center in this hotel—registration, meetings, luncheons and supper dance, and all excursions will start from the Broad Street entrance. Invitations and tickets must all be procured in the Roof Garden in advance, as nothing but programs will be obtainable elsewhere. Members of the A.M.A. are invited to join all excursions, and should register for them in advance in the Roof Garden. Rooms for state headquarters have also been reserved in the

\*Bus transportation paid by members.

†Inclusive price \$5.00.

hotel, and sponsors will be appointed to look after all women registered from their own states. The list of sponsors will be printed in the program. We take this opportunity to thank the management of the Bellevue for their generosity in placing all these facilities at our disposal free of charge. The chairman of the Women's Hotel Committee is Mrs. Frederick S. Baldi, 2117 Porter Street, Philadelphia, who will be glad to make any desired reservations.

The convention will open with a subscription buffet luncheon in honor of all national auxiliary presidents from Mrs. Red to Mrs. McGlothlan, immediately followed by three round tables of 35 minutes each, with 10 minute intermissions, each under expert leadership. The subjects will be:

1. Programs for County Auxiliary Meetings.
2. The Technique and Value of a Committee on Public Relations.
3. History and Archives.

These informal gatherings will be a sort of preliminary canter, designed to bring together those interested in special phases of auxiliary work and give them opportunity to discuss the subject thoroughly during the following days. The national board dinner and pre-convention meeting are scheduled for Monday evening.

A new and, we hope, helpful feature will be a question and suggestion box to which we beg all with good ideas to contribute. This seems the most practical way of finding out what our members want continued, what discarded, and what plans are indicated for the future.

The regular business sessions will be held on Tuesday and Wednesday mornings. National chairmen will be allowed 10 minutes for their reports, state presidents 3 minutes. Reports to be printed may be as long as desired (in reason), but let no one reporting on the floor imagine these limits an idle jest. Nor will the hours announced on the program be found to mean "about." Have your watches cleaned and regulated, and practice your wrist drill before leaving home. You will need it.

Thursday morning, too, will be a busy one, the post-convention board meeting, a special meeting for state and county treasurers desiring further elucidation of the treasurers' receipt blanks, and at 10:30 an informal round table presided over by the new president, the subject, "What Have I Gotten Out of the Convention?" At this meeting Mrs. McGlothlan will announce her committee chairman and outline her plans for the coming year, and the subjects in the question box will be discussed, a sort of stock taking, closing the year's business and opening the new books.

Philadelphia as a historical and cultural center is the keynote of the entertainment planned for our guests. Except Monday, all afternoons and evenings will be devoted to pleasure, and a variety of excursions is offered to suit all tastes, all physiques, and all weathers. They include bus trips to Valley Forge and to Longwood, the beautiful estate of Mr. and Mrs. Pierre S. du Pont, a boat trip on the Delaware, and visits to the Fairmount and Rodin Museums and to the Historical Society of Pennsylvania. The museum authorities are delighted to provide docent service for those desirous of more than a passing glance at their treasures, and the Historical Society will arrange a special exhibition for the week, including portraits, prints, and engravings, documents, silver, etc., from its unsurpassed collection of Americana. There will also be a brief historical address by Dr. Charles W. Burr of Philadelphia.

Wednesday will be a field day—the big auxiliary luncheon, with guests and speakers from the A.M.A. and a beautiful musical program, the gift of the Delaware auxiliary. In the afternoon the Philadelphia County Medical Society invites the women to be their guests on a bus trip through historic Philadelphia (a 10 minute stop at Independence Hall), Fairmount Park and Germantown to "Stenton," where the New Jersey Auxiliary invites us all to tea. "Stenton," the home of James Logan, Penn's friend, secretary of the colony, still stands just as it was built in 1728, the furniture of the period, the garden laid out as de-



scribed by contemporaries. On Wednesday evening the Pennsylvania Auxiliary invites all visiting ladies to a reception in the superb Chinese rotunda of the University Museum, a setting probably unsurpassed in any museum anywhere.

This meeting of the A.M.A. in Philadelphia is the first in 30 years, and the County Medical Society, desiring to mark so auspicious an occasion, and also in appreciation of the work of the auxiliary, invites all members of the A.M.A. and the visiting ladies to be their guests at a supper dance in the Ball Room of the Bellevue, following the big meeting of the A.M.A. on Tuesday evening at the Academy of Music. The president's ball at the Benjamin Franklin Hotel on Thursday evening, to which all are invited, will close the formal festivities.

To those still able to rise from their beds on Friday morning there are offered a tour of Wanamaker's with luncheon in the Crystal Tea Room, or an all-day bus trip to Atlantic City, where the New Jersey Auxiliary will meet them for luncheon at the Claridge. This program includes also a visit to the new Convention Hall, an hour in a chair on the boardwalk and plenty of time for window shopping or a swim.

And finally, every day and all day there will be a booth in the Roof Garden inscribed "As You Like It"—Anywhere, where those wishing to golf, shop, go to Garden Days, or carry out any other pet project not elsewhere provided for may find information and assistance in making a profitable use of their opportunity.

Will you not reward our efforts by the largest and most enthusiastic women's attendance in the history of the American Medical Association.

CORINNE KEEN FREEMAN,  
General Chairman.

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### BOOKS

*Medics or The Glory of Man* by Jas. A. DeMoss, Thayer, Kansas. Price \$1.25.

This is a collection of poems written at various times by Dr. DeMoss. His theme in practically all of them justifies the title to the book. There are several hundreds of these poems. They are all

well written, many of them are beautiful and some of them are classics.

*Symptoms and Diseases Applied, Differential and Mathematical Diagnosis*, by W. L. Kitchens, M.D., Texarkana, U.S.A.

The author has attempted something rather unique in medical literature. He has endeavored to put diagnosis upon a mathematical basis. First, symptoms are grouped and numbered according to the pages on which they may be found. Second, all the disease in which a particular symptom occurs are named and numbered according to the pages on which they are found. Third, under each disease all of the symptoms that may occur are named. List all the symptoms by number. Refer to the corresponding pages and find lists of all diseases in which the symptoms occur, refer by number to each of these diseases, find the one which corresponds with the larger number of symptoms and the diagnosis is made. One may be pardoned for suggesting that mathematical procedures do not always result in mathematical accuracy. The author has evidently spent a great deal of time and energy in the preparation of this book and it does offer something of considerable value as a reference book where one may quickly find the relative importance of a symptom or group of symptoms. It may also offer some assistance in differential diagnosis in the tables of symptoms occurring in various diseases.

*Selections from The Papers and Speeches of John Chalmers DaCosta, M.D., LL.D.*, Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia, Pa. 440 pages. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$6.50.

DaCosta has many admirers not only among former students but among those who have only had the pleasure of reading his books. All of these will be glad to read these selections from his papers and speeches. But these papers and addresses have an appeal of their own that should attract many students of medical history as well as those who have contributed even a little to history making.

*Laboratory Diagnosis*, a textbook with clinical applications for practitioners and students by Edwin E. Osgood, M.D., and Howard D. Haskins, M.D., both in the University of Oregon School of Medicine.

Published by P. Blakiston's Son & Company, Philadelphia. Price \$5.00.

All the various laboratory procedures are carefully described and the relative importance of the laboratory findings are discussed. An effort is made by the author to present the laboratory diagnostic methods so that the practitioner will have at least an idea of the proper interpretation of the results. The book is quite up to date.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 14, Number 5. (Chicago Number—March, 1931.) Octavo of 255 pages with 21 illustrations. Per Clinic year, July 1930 to May 1931. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1931.

Williamson presents a group of leukemias and leukemic-like conditions. Hess discusses purpuras in children. Drenan, Val Dez and Murray have a clinic on intestinal obstruction. Traut presents a case of hernia of the diaphragm. Brams discusses the treatment of cardiac insufficiency. Finnerud gives a dermatologic clinic. Scupham discusses the treatment of early chronic nephritis. Solem discusses fermentative colitis. In the clinic of Sloan and Roberts a variety of cases is noted. Arkin presents some unusual lesions of the gastrointestinal tract. Goldsmith presents some cases of gonorrhoea of the rectum. Zeisler presents a clinic of sclerosis of coronary arteries. Abt calls attention to some cases of pertussis with extreme leucocytosis. Buchbinder presents some cases of so-called recurrent thyrotoxicosis. Solomon presents the problems in diagnosis and treatment of post-traumatic syndromes not based on organic pathology. There are also a number of other interesting articles in this number of the clinics.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume II, No. 1. (Chicago Number—February 1931.) 225 pages with 72 illustrations. Per Clinic year (February 1931 to December 1931.) Paper, \$12.00; Cloth, \$16.00. Philadelphia and London: W. B. Saunders Company, 1931.

Bevan presents a series of clinical cases illustrating the principles involved in the operation of laparotomy. Speed describes a case of aerocele of the scrotum. Moorhead presents a new classi-

fication of thyroid conditions with diagnosis and treatment. Nadeau presents a case of carcinoma of bladder apparently cured by erysipelas. Bailey discusses neuralgias of cranial nerves. Gatewood presents a case of acute cholecystitis in a boy eleven years old. Andrews describes a case of carcinoma of cecum with operative procedure. Christopher presents a case of dislocation of hip and fracture of the posterior rim of acetabulum. Portis presents a case of thrombocytopenic purpura treated by splenectomy. Theis describes the principles and technic of treating varicose veins by the injection method. Cornell presents a clinic on abdominal pregnancy. O'Connor deals with functional incontinence of urine in women. All of the papers in this number of the clinics are interesting and instructive.

Modern Surgery. By J. Chalmers DaCosta, M.D., LL.D., F.A.C.S., Samuel D. Gross, Professor of Surgery Jefferson Medical College, Surgeon to Jefferson Medical College Hospital, Consulting Surgeon to the Philadelphia General Hospital, St. Joseph's Hospital and Misericordia Hospital, Philadelphia. Assisted by Benjamin Lipshutz, M.D., F.A.C.S., Surgeon to the Mt. Sinai Hospital; Associate in Neuro-anatomy, Jefferson Medical College. Tenth edition, revised and reset. 1404 pages with 1050 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$10.00.

There is no need to comment on Da Costa's Surgery as a textbook. It is enough to say that the tenth edition has been revised by the author himself. As evidence of his full appreciation of the task, the following is quoted from his preface: "One comes to realize as he goes on that he must add the new if it seems to him to be true and that he must have the courage to omit the new if it seems to him to be erroneous. We must try to avoid being caught in the subtle trap of fashion in surgery. We must try to remember in our selections that in this peculiarly brilliant and active age of surgery fashion may sometimes rise to a disastrous supremacy; furthermore, custom, however old, may happen to be totally wrong. Fashion, however popular, may be an utter mistake. Between seizing with accuracy the new that is true and original we all have a tendency to emphasize the new which is the fashion and to hold tenaciously to the



old which seems to be correct. It is particularly hard to get rid of old impressions."

**Traumatotherapy.** By John J. Moorhead, B.Sc., M.D., F.A.C.S., Professor of Surgery and Director, Dept. of Traumatic Surgery, New York Post-graduate Medical School and Hospital; Surgical Director, Reconstruction Hospital Unit; Colonel Medical Officers Reserve Corps, U. S. Army. 574 pages with 625 illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$7.00.

This is one of the new books that practitioners as well as surgeons will appreciate. In these days of rapid travel by automobile and airplane injuries from accidents on the highways form a large part of surgical practice. The author confines himself to the details of treatment of all kinds of injuries and the details are exhaustive. The text is excellently illustrated.

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### **Third Congress of the Pan American Medical Association, Mexico City, Mexico**

The Organization Committee of the Third Congress of the Pan American Medical Association has made a cordial invitation to those who are interested in medical interchange among English, Spanish, French and Portuguese speaking doctors of Panamerica for our next meeting which will be held at the City of Mexico from the 26th to the 31st of July, 1931, under the auspices of the government of the Republic of Mexico.

This medical conference meets for the purpose of maintaining and promoting a more intimate understanding between the medical men of the New World, and with the efforts of many prominent North and Latin American physicians, a great success has been accomplished in the past meetings.

The proceedings of these congresses reveal a record of achievements so necessary for the better scientific knowledge among our countries, and a step toward international medical progress.

Mexico, though so close to home and filled to bursting with the things we like to see and to enjoy—beauty, history, gayety, novelty, hospitality—is too little known by Americans. There is so much in Mexico that fulfills every wish of those who travel for pleasure and diversion but also for those interested in edu-

cational, public health and scientific institutions.

#### **PROGRAM**

Sunday, July 26, 8 p. m.—Inaugural session attended by the Honorable President of the Republic at the "Bolivar Hall" of the National Preparatory School.

Monday, July 27, 9 a. m.—Practical demonstrations in medical and surgery in several hospitals and laboratories.

3 p. m.—Sessions of different sections.

7 p. m.—Reception at Chapultepec Castle by the Honorable President of the Republic.

Tuesday, July 28, 9 a. m.—Practical demonstration in medicine and surgery in several hospitals and laboratories.

1 p. m.—Lunch under the auspices of the Organization Committee at the National Preparatory School.

3:30 p. m.—Sessions of different sections.

9 p. m.—Concert at the Hall of the National Preparatory School.

Wednesday, July 29, 9 a. m.—Visit to several branches of the Department of Public Health.

1 p. m.—Lunch under the auspices of the Department of Public Education.

3:30 p. m.—Sessions of different sections.

8 p. m.—General session at the National Academy of Medicine in honor of foreign delegates.

Thursday, July 30, 9 a. m.—Sessions of different sections.

10 p. m.—Ball offered by the Department of Public Health.

Friday, July 31st, 10 a. m.—Meeting of the Committee on Resolutions.

8 p. m.—Final general session.

A scientific and commercial exposition will take place where the sessions are to be held.

For the convenience of those attending the meeting special excursion rates have been arranged with the steamship lines and by railroad.

From the Atlantic coast, via New York, by the Ward Line: Rate to Mexico City and return, in first class, including the railroad from Vera Cruz to Mexico, \$150.00 and from Havana \$115.00.

Any information can be obtained from:

Dr. Francisco de P. Miranda, executive secretary of the congress, Departamento de Salubridad, Mexico City. Dr. Conrad Berens, treasurer of the Pan American Medical Ass'n., 35 East 70th St., New York City. Dr. J. E. Lopez Silvero, executive secretary of the association. Secretaria de Sanidad, Havana, Cuba.

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### The Clinic Tour

In the March number of this Journal appeared an advertisement of a clinical tour of Europe under the auspices of seventeen of the State Medical Journals and at special low rates.

The following is a list of the men in Europe who are making the local arrangements in each place for the members of the party.

#### LONDON

A. McBeth Elliott, M.D., Master of Surgery.

#### HOLLAND

Dr. Jan Shoemaker of the Shoemaker Clinic in The Hague, assisted by Dr. W. H. Teupken.

#### BERLIN

Dr. Max Boehm, Medical Advisor of the German Government.

#### LEIPZIG

Dr. Wilhelm Lange, Director of the Nose and Ear Clinic of the University and of the new Pathologic Anatomical Institute.

#### DRESDEN

Dr. Rostoski and Dr. Bahrtdt, Professors in the University, and Chief Surgeons of the Municipal Hospital.

#### PRAGUE

Professor Arnold Jirasek, Professor of Surgery in Karlova University.

#### VIENNA

Hofrat Dr. Anton Eiselsberg, and Hofrat Dr. Julius Wagner-Jauregg, Professors in the University of Vienna.

#### MUNICH

Professor Doctor Erich Lexer, Director of the Institute of Clinical Surgery and Professor Doctor Friedrich Mueller of the Medical Faculty.

#### ZURICH

Professor Doctor Otto Veraguth, Dean of the University.

#### BERNE

Dr. Karl Wegelin, Dean of the Medi-

cal Faculty. A cordial welcome from Dr. F. de Quervain.

#### PARIS

Dr. Henri Hartman, Professor of Surgery in the University of Paris and President of the National Committee on the Development of Medical Connections.

#### RADIOLOGICAL CONGRESS

Also please point out that the week in Paris coincides with the meeting of the International Radiological Congress. President Dr. Beclere has expressed a genuine interest in having our members visit the Congress. The Congress will be comprised of six sections:

1. Radio physics
2. Radio biology
3. Radio diagnostics
4. Radio Therapy
5. Medical Electrology
6. Natural and Artificial Heliotherapy.

An exhibit will also be organized in connection with the Congress. Members who desire to take part in the festivities and receptions organized for the occasion of the Congress should send their subscription in advance to the Secretary of the Congress, Dr. R. Ledoux-Lebard, 122 Rue de La Boetic, Paris (VIII). The subscription is 300 francs (\$12) for official members attending the Congress and 50 francs, (\$2) per person for those accompanying the members.

The following questions will be analyzed:

1. Radiologic examination of the Alimentary Canal.
2. Radiologic examination of the Urinary Tract with concrete illustrations.
3. Treatment of Cancer.
4. Radiotherapy of Inflammatory Diseases.
5. Electrotherapy Diathermia of Inflammatory Diseases.

In each case a conference of thirty minutes' duration will be held in the presence of the whole assembly and members of the Congress are cordially invited to bring forth the results of their personal experience on the different subjects involved.



**American College of Physicians Fifteenth Annual Clinical Session**

The Fifteenth Annual Clinical Session of the American College of Physicians will convene in Baltimore, Maryland, March 23-27, and in Washington, D. C., March 28, 1931. The organization holds this session in Baltimore through the cordial invitation of the Johns Hopkins University School of Medicine, the University of Maryland School of Medicine, the Medical and Chirurgical Faculty of the State of Maryland, the Baltimore City Medical Society, and the further co-operative interest manifested by the various Baltimore hospitals and civic societies. Held in important medical centers, these clinical sessions constitute, perhaps, the most important post-graduate week in internal medicine each year. Those who attend the meeting will find ample in the way of clinical, laboratory, research and historical interest, well to repay them for the time spent in making the journey. Dr. Sydney R. Miller, of Baltimore, president of the American College of Physicians, has prepared the program for the General Scientific Sessions, while Dr. Maurice C. Pincoffs, general chairman, also of Baltimore, has arranged the program of clinics, demonstrations, entertainment, etc.

As an added feature of the clinical session this year, an additional day, March 28, will be spent in Washington, D. C., where a special program of clinics and inspection tours has been arranged under the auspices of the Medical Departments of the U. S. Army, U. S. Navy, U. S. Public Health Service and Georgetown University. Dr. William Gerry Morgan is acting as chairman of the Washington committee, and is being assisted by Admiral Charles E. Riggs, Surgeon General of the Navy; General Merritte W. Ireland, Surgeon General of the Army; General Hugh S. Cumming, Surgeon General of the U. S. Public Health Service; Dr. William A. White, Director of the Government Hospital for the Insane; Dr. John A. Foote, Dean of the Medical Department of Georgetown University; Dr. Ales Hrdlicka, Director of the Department of Zoology of the National Museum; Dr. Roy Adams, Chief

of the Medical Service at Mt. Alto Veterans' Hospital; Dr. W. H. Hough, President of the Medical Society of the District of Columbia; Dr. C. B. Conklin, Secretary of the Medical Society of the District of Columbia; Dr. George W. McCoy, Director of the U. S. Hygienic Laboratory; and Colonel Charles R. Reynolds, Commandant of the U. S. Army Field Hospital School of Carlisle Barracks.

The entire program of the clinical session is characterized by new subjects, new authors and wide geographic representation. It is significant that the committees have attempted carefully to avoid repetition of subjects and authors, as has so often been the case in previous years, not only on the program of the American College of Physicians, but on the program of a great many medical organizations. On the general scientific programs there will be forty-five or fifty selected formal papers. Symposia on blood diseases, oxygen therapy, diseases of the liver, recent advances in endocrinology with particular reference to the newer work on supra-renal extracts, myocarditis, and several other subjects have been arranged. At Baltimore's many modern and excellently operated hospitals, clinics, ward-walks, laboratory demonstrations and the like will be held. Johns Hopkins Hospital and Medical School, under Dr. Alan M. Chesney, dean, and a specially appointed committee, will place at the disposal of the college all of its facilities and offer a program of great interest. Additional hospitals, such as the Union Memorial Hospital, St. Agnes Hospital, at which Dr. Joseph C. Bloodgood does so much of his work, the Municipal Hospitals, and several of the more private institutions, such as the Howard A. Kelly Hospital, noted particularly for its radium activities, and the Sheppard and Enoch Pratt Hospital, which is one of the most modern dealing with psychiatric problems, and many others will provide programs of clinics.

Hotel headquarters will be at the Lord Baltimore Hotel, while general headquarters, at which the registration of members, commercial exhibits and all

general sessions will be held, will be The Alcazar, Cathedral and Madison Streets, Baltimore. Transportation on the certificate plan of reduced fares will be available to all physicians and dependent members of their family from all parts of the United States and Canada. A special program of entertainment has been arranged for visiting ladies. The convocation for the induction of new members, as masters or fellows, will be held on Wednesday evening, March 25, and the annual banquet will be held on Thursday evening, March 26. The business meeting, at which reports of administration and elections for the new year will take place, will be held during the forenoon of Thursday, March 26.

Mr. E. R. Loveland, 133-135 S. 36th Street, Philadelphia, is the executive secretary of the college, and it is to him that requests for further information or programs should be addressed.

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#### **Maternal Mortality In the Registration Area: 1929**

Washington, D. C., Oct. 29.—The Department of Commerce announces that for the birth registration area the mortality from puerperal causes (7.0 per 1,000 live births) in 1929 was only five-tenths higher than the rate (6.5) for 1927, the last year for which the summary was published. Puerperal septicemia was affected even less, the rate for 1927 having been 2.5, as compared with 2.6 in 1929, and the rate for "other puerperal causes" was lowered to 0.3 in 1929. These maternal rates are based on the number of deaths among women 15 to 45 years of age per 1,000 live births.

Confining the discussion to only three groups, namely, "all puerperal causes," "puerperal septicemia," and "other puerperal causes," it will be noted that of the 46 states for which data are available for 1929, South Carolina had the highest mortality rate (11.4), with Alabama and Louisiana next in order (each 9.9), Florida (9.5) and Georgia (9.3). It must be borne in mind, however, that all the states with excessively high rates have large proportions of colored populations. Singularly, the states with high rates from "puerperal septicemia" are

Montana (4.2), Colorado (4.0), New Mexico (3.9), and Arizona (3.8), all with vast rural areas sparsely settled, where hospital facilities and skilled medical care are difficult to procure.

"Accidents of pregnancy" had a rate of only 0.7 for the entire registration area, "puerperal hemorrhage and other accidents of labor," a rate of 1.6, and "puerperal albuminuria and convulsions," 1.8, while the rates in the states for the three causes, respectively, were highest for Vermont (1.3), Delaware (3.0), and South Carolina (4.7). Heretofore the total deaths from these three causes have been under "other puerperal causes."

Of the cities of 100,000 population in 1920, the highest rate for puerperal causes was for Memphis (16.0), followed by Nashville (14.7), and Birmingham (14.4). These three cities have large colored populations. For "accidents of pregnancy" and "puerperal hemorrhage and other accidents of labor," Memphis again takes the lead, with respective rates of 2.3 and 4.3 per 1,000 live births, while for "puerperal albuminuria and convulsions," New Orleans has the highest rate (4.4). The city with the highest rate for "puerperal septicemia" is Nashville (9.0), followed by Memphis (6.1) and Akron and Birmingham (each 5.7).

Certain cities which reached 100,000 population at the census of 1930 are included in the table, and for these the highest rate (14.1) for all puerperal causes is for Jacksonville, Fla., followed by Peoria (12.5), Chattanooga (11.9), Evansville (11.8), Knoxville (11.7), Fort Wayne (11.0), and Tulsa (10.8). Taking in order the last five causes on the table, the highest rate is for Jacksonville, Fla., (2.7), Chattanooga (3.3), Peoria (8.9), Knoxville (4.0), and Somerville (1.2).

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#### **Bacteremia and Acute Throat Infections**

Howard C. Ballenger and Marie Werner, Chicago, and Mitchell I. Rubin, Baltimore (J.A.M.A., Dec. 13, 1930), examined a great number of subacute throat infections in some of which secondary manifestations had occurred with the apparent etiologic factor in the throat infection. Ninety-three throat



cultures were taken in which the green cocci were found to be the predominating organism in sixty-four instances (about 69 per cent). *Streptococcus hemolyticus* was obtained in twenty-one cultures (about 23 per cent); *Staphylococcus albus* in six instances (about 7 per cent). *Staphylococcus hemolyticus* was isolated in two cases. The Klebs-Loeffler bacillus was incidentally found in two throats. Eighty-seven cultures were taken from the nose. The predominating organism found in forty-four instances (about 50 per cent) was *Staphylococcus albus*. This is in marked contrast to the throat cultures, in which this organism occurred in only 6 per cent of the cultures taken. The green cocci were next in order of frequency, occurring in thirty-one instances (about 36 per cent). *Streptococcus hemolyticus* was found in the nose in ten cultures (about 12 per cent). *Staphylococcus aureus* and *Staphylococcus hemolyticus* were recovered once each. The throat and nose cultures were taken together in twenty-nine instances. A streptococcus and a staphylococcus were found in about two-thirds of the cultures. The green coccus was isolated in eight instances. Cultures of the mastoids were taken at operation in five cases. *Streptococcus hemolyticus* was obtained three times, a green coccus and a pneumococcus once each. Cultures taken from the appendix at operation in three cases revealed *Streptococcus hemolyticus* in two instances and a green coccus in one case. *Streptococcus hemolyticus* was recovered from a profuse ear discharge in the one case in which a culture was taken. Cultures of the spinal fluid in the two cases taken were negative. One hundred and thirty-one blood cultures were taken in sixty-three cases. In four children a positive culture of the blood was obtained. *Streptococcus hemolyticus* was found in two cases and a green coccus and a pneumococcus in one instance each. In the various complications that may be due to an acute throat infection, *Streptococcus hemolyticus* was found in two thirds of the cases.

### No Intestinal Antiseptic

There is really no such thing as an intestinal antiseptic, if that term is defined as equivalent to disinfectant, there being no known influence capable of killing the micro-organisms in the living intestine. If the term is defined to include inhibition of the growth and diminution in the number of intestinal microbes, then diet (milk diet in most adults) constitutes perhaps the most important influence of that kind. Mild mercurous chloride might qualify as an efficient drug with a tendency in this direction. Phenolsulphonates (sulphocarbolates) are worthless. (J.A.M.A., June 14, '30.)

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### Riggs Optical Company Announces New Chicago Management

Mr. Edw. W. Arnold, well known territorial supervisor for Riggs Optical Company has been selected as manager of this company's Chicago city office. Mr. Arnold has had many years' training and experience in the optical field. He is a qualified executive and is conversant with all phases of optical work and service. He has shown unusual ability to serve and please his clientele. His knowledge of the problems which confront the profession and his co-operative spirit will be welcomed indeed by those in the territory served by Riggs.

Mr. J. A. Lynch, who also has a long and creditable record in optical circles has been selected as assistant to Mr. Arnold.

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### The American Public Health Association

The Sixtieth Annual Meeting of the American Public Health Association will be held in Montreal, Quebec, September 14-17. The Windsor Hotel will be headquarters.

Members of the Kansas Medical Society may interpret this announcement as an invitation to attend that convention.

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### Radical Operations for Major Trigeminal Neuralgia

From a personal experience with 654 major operations for major trigeminal neuralgia, the douloureux, Charles H. Frazier, Philadelphia (J.A.M.A., March

21, 1931), is convinced that from every point of view—relief to the patient, the almost total elimination of operative hazards and complications, and the invisible scar—the operation is one from which the surgeon derives greater satisfaction than after any other surgical experience. The major purpose of the contribution is to relate his experience with 614 major operations. The major operation is not urged on every patient. It is his practice now, as it always has been, to leave to the patient the choice as to whether he shall have an alcoholic injection or submit to the operation. Low as the mortality is, it should be the patient's privilege to decide after he understands fully what may be expected of each. The author does not describe the technic of the operation step by step, but merely makes some passing comments which those who perform the operation only occasionally may find helpful. He submits this contribution, supplemental to previous articles, chiefly in the interest of the patient. There are still too many patients who, for lack of disseminated information, continue unrelieved for too many years.

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#### **Treatment of Trigeminal Neuralgia With Trichlorethylene**

The result of a statistical summary by Mark Albert Glaser, Los Angeles (J.A.M.A., March 21, 1931), shows that approximately 15 per cent of the reported cases of trigeminal neuralgia treated by trichlorethylene therapy were completely relieved of symptoms. The percentage of partial relief varies with the different investigators. In a series of fifteen cases observed by the author, 13.3 per cent of the patients were partially relieved. Trichlorethylene therapy is ideal in the treatment of trigeminal neuralgia in those cases in which the drug is effective, as the pain is relieved without a resulting anesthesia. Trichlorethylene is not toxic. The action of trichlorethylene in the relief of trigeminal neuralgia is unknown. It is doubtful that trichlorethylene is the original drug responsible for the toxic symptoms and the anesthesia in Plessner's industrial workers.

#### **Iron and Copper In Treatment of Anemia In Children**

As there is still some controversy in the literature as to the effects of iron in the treatment of anemia in children, it occurred to Milton Smith Lewis, Nashville, Tenn. (J.A.M.A., April 4, 1931), that it was of considerable importance to determine whether the effect of iron could be enhanced by the addition of copper, and it was felt that a study of the therapeutic action of these two elements may help to demonstrate their value or lack of value as possible therapeutic agents in the treatment of anemia in children. It was found that iron and copper given in combination to thirty-four children with nutritional and secondary anemia was more effective than iron given alone. This was particularly noticeable in the nutritional series.

—R—

#### **Indispensable Uses of Narcotics**

Horatio C. Wood, Jr., Philadelphia (J.A.M.A., April 4, 1931), prefaces his enumeration of the therapeutic uses of narcotic drugs with the statement that there are certain facts concerning opium or cocaine and their derivatives that should be borne in mind. First, they are valuable therapeutic agents; to banish them from the materia media is to work an unjustifiable hardship on suffering humanity. Second, the habitual use of them is a real menace to the welfare of society, which should be combated with every weapon available. Third, the injudicious use of these substances as remedial agents has in many instances resulted in the formation of a habit. With a knowledge of these facts the conscientious physician will not hesitate to use them when necessary demands but, on the other hand, will try to avoid their employment whenever possible by the application of less dangerous measures.

—R—

#### **Rupture of Spleen In Malarial Therapy In Syphilis**

S. H. Polayes and Max Lederer, Brooklyn (J.A.M.A., April 4, 1931), gives abstracts of eight cases of rupture of the spleen in malarial therapy in syphilis reported in the literature and to these add a case that they observed.



They state that spontaneous rupture of the spleen occurs much more frequently in cases of induced malaria for syphilis of the central nervous system than in naturally acquired malaria. The usual changes predisposing to rupture, namely, enlargement and softening, are not present in spleens of patients suffering from syphilis of the central nervous system prior to induction of malaria. The increase in fibrous tissue in the capsule and septums with resultant loss of elasticity that occurs in syphilis does, however, predispose to spontaneous rupture. The symptomatology of the complication is briefly described and the importance of its early recognition is emphasized. A plea is made for more careful choice of patients who are to receive malarial therapy to avoid the possible fatal complication—rupture of the spleen.

—R—

#### High Blood Pressure and Longevity

David Rieman, Philadelphia (J.A.M.A., April 4, 1931), cites five cases illustrating the compatibility of hypertension with longevity. One of the cases shows that even the arteriosclerotic form of hypertension is compatible with fairly long life. These cases, however, do not alter the fundamental fact that high blood pressure is not a bodily virtue. It is necessary to pick out the good cases from the bad so that one may be able to say to a given patient whether he has a chance to live long or whether an early death awaits him and that he had better make his will. In teaching, not enough attention has been paid to the art of prognosis. It is by the skill in this art that the public often judges the medical profession. Some of the means the physician has of foretelling the future of the hypertensive individual are indicated. One must always correlate the blood pressure with the age of the patient. Old persons bear high blood pressure better than younger ones. The height of the systolic pressure is not a reliable criterion unless it is excessively high. The patient's whole constitution must be weighed in the balance. More important than the systolic is the diastolic pressure. A high diastolic pressure

is a bad prognostic sign. Heredity to a great extent determines longevity. Longevity as well as its opposite is largely an inherited trait. Not enough attention has been paid to this by geneticists, but it is as striking a familial trait as the color of the eyes, the conformation of the head, or any other physical feature. Therefore, in a hypertensive patient who exhibits nothing else of moment save the hypertension, the prognosis is favorably influenced if he comes of a long-lived family. Much can be learned about a patient's general prospects by studying his temper and the influences that play on it. Irascibility is not conducive to longevity in the face of hypertension. The more fully a physician explains these matters to his patients, the better will be their co-operation. From the physical standpoint the prognosis is influenced by the size of the heart, the state of the arteries, the kidney function, the eyegrounds and the coexistence of diabetes.

—R—

#### Ether Hyperglycemia: Hepatic Disease

According to Abraham Cantarow and A. M. Gehret, Philadelphia (J.A.M.A., March 21, 1931), the hyperglycemia with ether anesthesia is due to increased hepatic glycogenolysis. The average rise in blood sugar per ounce of ether administered was 2.9 mg. per hundred cubic centimeters in a series of patients with frank icterus as compared with 7.6 mg. in a series of patients with biliary tract disease without jaundice. Prior to operation, all had received a diet high in carbohydrate with supplementary dextrose therapy. One patient, receiving 14 ounces of ether, failed to show any appreciable rise in blood sugar (0.7 mg. per hundred cubic centimeters per ounce of ether) and died eighteen hours after operation. Autopsy revealed extensive acute diffuse necrosis of the liver which had not been present at the time of operation. Preoperative studies of liver function in this patient did not differ in any essential from those in the other jaundiced patients who exhibited definite although subnormal hyperglycemic responses and who made uneventful recoveries. All patients with biliary tract

disease should be regarded as having hepatic damage whether or not evidence of hepatic insufficiency is demonstrable.

— R —

A Scotchman called up the doctor in great agitation.

"Come at once!" he said. "Ma wee child has swallowed a saxpence!"

"How old is it?" asked the doctor.

"1894!" replied the canny Scott.—Philadelphia Public Ledger.

✧ ✧ ✧

Mrs. Gossip: "Oh, doctor, I feel so ill."

Doctor: "Your temperature is normal. Your pulse is exact."

Mrs. Gossip: "Well, doctor, is my tongue coated?"

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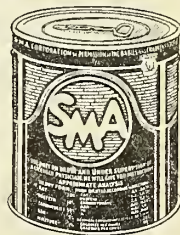


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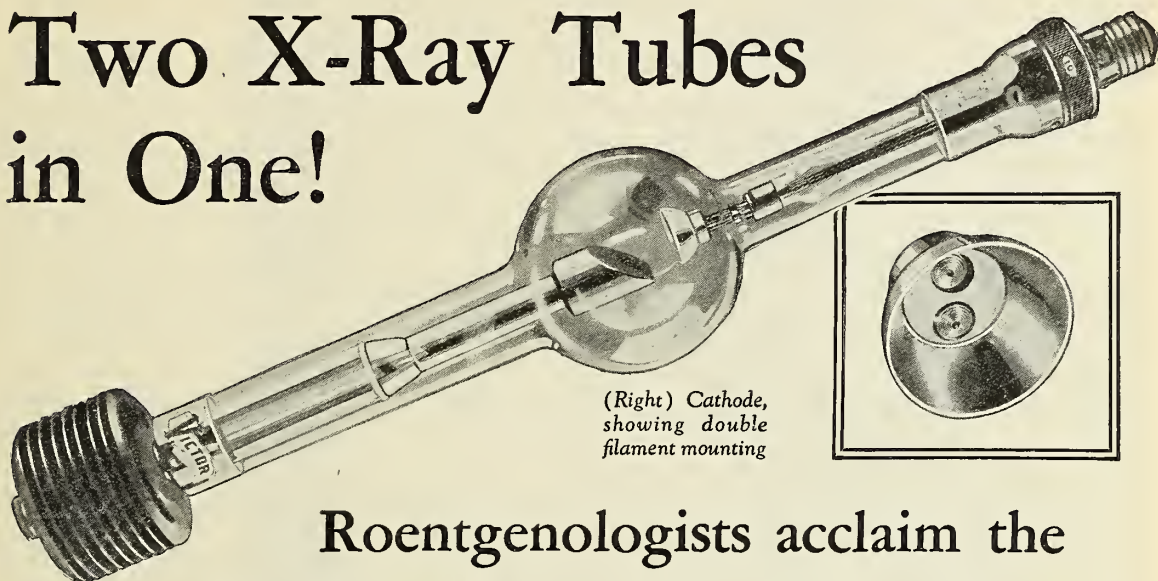
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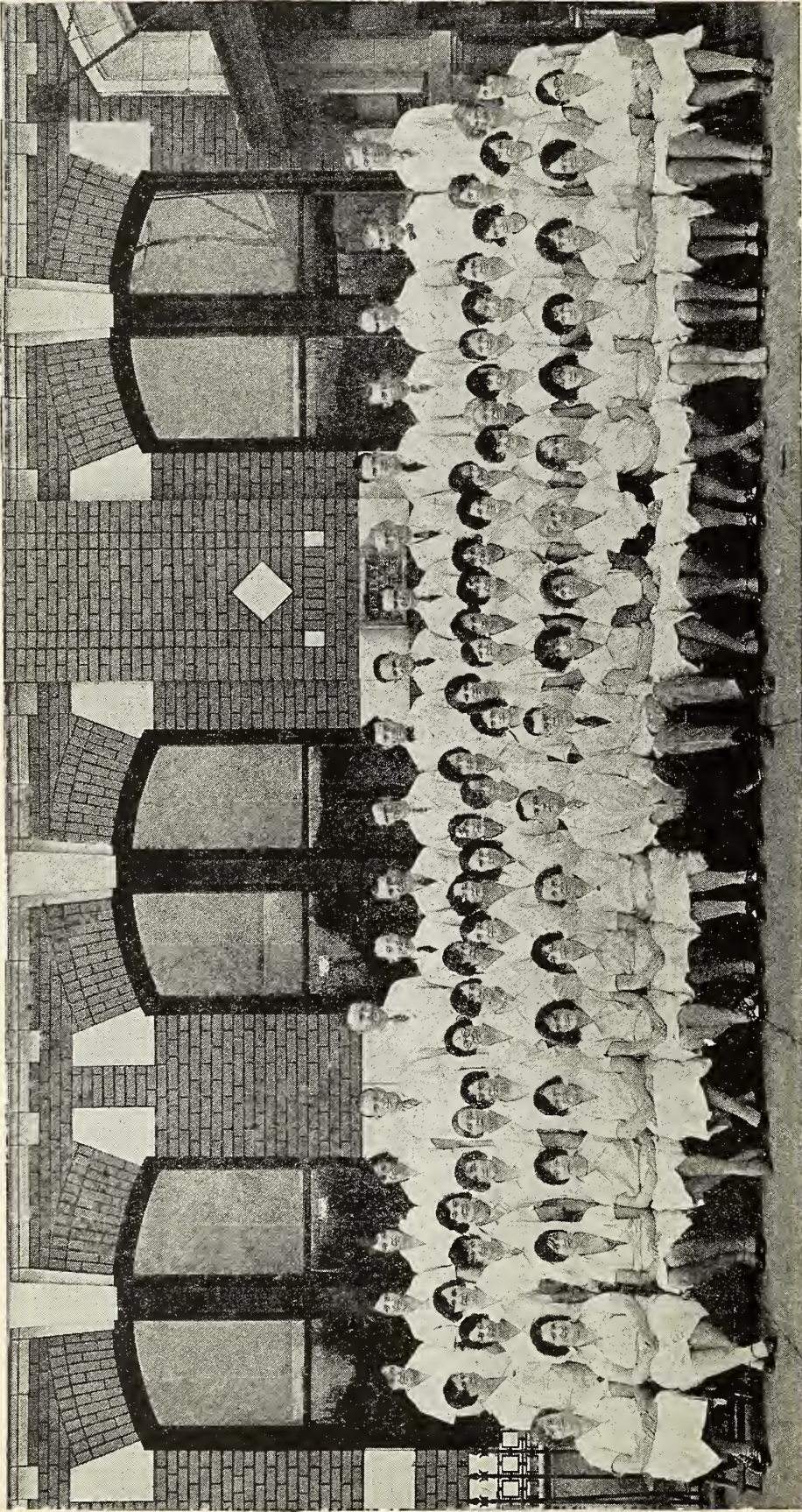
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### **The Early Diagnosis and Treatment of Acute Anterior Poliomyelitis**

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Poliomyelitis is a disease so dreaded by the public and by physicians alike for its tragic sequellae that anything we can do to improve our ability to diagnose and treat it early is well worth while. The lay public and especially parents of children have been educated to some extent along this line in recent years and expect more of us in this direction than they formerly did.

It is our object in this brief study to inquire to what extent these expectations are justified and what are our limitations in this direction and also to ascertain what can be done to prevent the onset of paralysis, assuming that we are able to make a diagnosis of poliomyelitis in the pre-paralytic stage. In other words, what can the public rightfully demand of its physicians in the detection of poliomyelitis in the pre-paralytic stage and in the prevention of paralysis?

Poliomyelitis is endemic in certain parts of the United States, becoming epidemic at certain times. It is the consensus of opinion among students of the disease that many cases of poliomyelitis in epidemics go unrecognized because the disease manifests itself sometimes by vague systemic disturbances which are not characteristic, and, unless paralysis occurs, cases of this kind cannot be diagnosed. Osler speaks of abortive cases which would not arouse suspicion but for the presence of other cases in a community, and mentions the fact that immune bodies have been demonstrated in the blood serum of such cases. The existence of such cases may account for the ineffectiveness of quar-

antine and prophylactic measures generally.

If the systemic symptoms are so mild at the beginning or of such short duration that the paralysis is the first thing to attract attention, then of course such a thing as diagnosis in the pre-paralytic stage is impossible. In a not inconsiderable group of cases, however, there is a period of one to four days preceding the paralysis during which certain symptoms and signs appear which make a diagnosis possible provided they are properly evaluated.

For our purpose, poliomyelitis cases can be divided into three groups: (1) Cases with symptoms not characteristic, which never develop paralysis and go unrecognized; (2) Cases in which the systemic symptoms are so indefinite that they are not recognized or so mild that they are missed altogether, and in which diagnosis therefore is not made until the onset of paralysis; (3) Cases with a fairly characteristic syndrome in which certain signs of meningeal irritation precede the paralysis.

In this latter group diagnosis in the pre-paralytic stage is possible and should be attempted. This report is based in part upon 28 cases of acute anterior poliomyelitis observed at the Kansas City General Hospital and Bell Memorial Hospital during the summer and fall of 1930, as well as upon our experience. We found in the histories of our cases that the symptoms which preceded the onset of paralysis were usually fever, headache, gastro-intestinal disturbance, with vomiting, often constipation, frequently pains in the muscles, stiffness in the neck, and reflex changes. The above were the principal symptoms. Muscular twitching was occasionally reported, while such things as redness or soreness of the throat, dizziness, weak-



ness, convulsions and nystagmus and rash were only very occasional.

It is evident, of course, that a combination of headache, fever, vomiting and constipation may occur with almost any acute infectious disease. When muscular pains and stiffness of the neck occur, however, in combination with the above named symptoms, and especially if disturbances of the reflexes are present, a lumbar puncture should be done at once.

One of our early cases was a boy six years of age who became ill, with fever, headache and gastro-intestinal disturbance. His mother took him to the family doctor the next day at noon. Upon examination, not only the physician but also the mother noticed the great increase in the knee jerks. The same evening at 7 o'clock he was again taken to the doctor by his mother, as he seemed worse. At this time the mother, as well as the physician, was very much impressed with the fact that the knee jerks were almost gone. He was seen by one of us, and a spinal puncture was advised, and a clear fluid under pressure was obtained. The cell count was normal. The patient nevertheless was given human serum intraspinally and intramuscularly, and his symptoms all disappeared within the next three days. No paralysis occurred. On account of the fact that there was no increase in cells in the spinal fluid, we were in doubt for a while as to the true nature of this case. However, we subsequently saw another case in which the same sort of a spinal fluid picture was followed by an extensive paralysis.

The fever usually ranges from 100 to 102 degrees (rectal), although occasionally it is seen in uncomplicated cases to rise as high as 104 or 105. The leucocyte count varies greatly. In our series of cases, 23 of which had blood counts, the lowest was 6,750 and the highest was 19,800. The average count was 11,437, and in 61 per cent the blood counts were between 9,000 and 15,000. The white blood count does not parallel the fever level. In one case, on the same day that the temperature was 104 the white blood count was 6,800, while in another case,

with a temperature of 99.6 the blood count was 19,500. We have not found that the leucocyte count is of any particular value in differential diagnosis, and if it is in the neighborhood of 20,000, it may be positively confusing, as it may lead one to suspect epidemic meningitis.

The spinal fluid cell count shows almost as much variability within certain limits. It may be counted from normal to 200 cells in most cases. In our present small series it was found to be above that figure in only 4 cases. In a study of 117 cases reported (Human Cerebro-Spinal Fluid) 15 per cent of the fluids showed cell counts under 10 per cu. mm. and 88 per cent under 200 per cu. mm. In the same series it was noted that the number of cells ranged from 20 to 1800 in the first week and from 12 to 567 the second week. The cell count gradually returned to a normal figure by the fourth week of the disease, although elevated counts occurred as late as the seventh week in exceptional cases. In the pre-paralytic stage the polymorphonuclear cells are said by some writers to be found at times in a greater percentage than the mononuclear type. In a study of 2000 fluids examined on various days Neal found this to be true in only 39 cases. None of our pre-paralytic cases showed more than 25 per cent polymorphonuclear cells, except one, an adult, who several hours preceding paralysis had a cell count of 660 and differential of polys 45 per cent and mononuclear cells 55 per cent. Lyon states that a clear spinal fluid containing 50 per cent or more of multilobed cells is suggestive of acute poliomyelitis infection and that when in the course of from twenty-four to thirty-six hours the lumbar puncture is repeated and there is a fall in the total cell count with a shifting of the differential count to a mononucleosis of 90 per cent or more, one may be certain that the condition is one of poliomyelitic infection. This cellular response, he states, is pathognomonic, as it has not been observed in the spinal fluid in other conditions. Because of rapid cytolysis counts made from spinal fluids more than an hour or two old will be inaccurate.

The pressure of the spinal fluid is usually recorded from normal to 30 or 40 mm. of mercury. In our series one case, that of a child aged 3, known to have had prodromal symptoms not to exceed 8 hours, had a pressure of 30, the highest recorded pressure of the series. Another case which developed symptoms within the hospital after an admission of 2 months for chronic eczema and was punctured within the first 24 hours had a pressure of 22. The child developed a Bell's Palsy four days later. In all the cases admitted with paralysis and having spinal puncture not longer than 3 days after onset of paralysis, the highest recorded pressure was 16. It is believed that increases of pressure are most marked early in cases of meningeal involvement and that the pressure shows a tendency to fall to a more nearly normal or normal level rapidly with the subsidence of acute symptoms (in contrast to the number of cells which tend to show an increase for some time).

The albumin and globulin are usually increased in the majority of cases, and this augmentation, when it occurs, tends to persist after the cell count has returned to normal.

Recent writers have emphasized the constancy of the Lange colloidal gold reaction in poliomyelitis. The spinal fluid in this disease produces a reduction in the colloidal gold solution in the tubes commonly called the luetic zone, giving a low luetic curve. It is said to be one of the most persistent of pathological findings in the fluid, for it remains elevated in a majority of the cases beyond the fourth week of the disease. It is unfortunate that because of the difficulty so frequently encountered in obtaining or keeping stable and dependable colloidal gold solutions this test cannot be more universally employed, or that the element of time must be so great to receive reports from dependable laboratories.

To recapitulate: There are certain cases of poliomyelitis in which a fairly characteristic combination of signs and symptoms precedes the onset of paralysis. These are fever, headache, gastro-intestinal disturbances, with vomit-

ing and constipation, muscular pains, stiffness of the neck and spine and changes in the reflexes. In the presence of an epidemic this combination will be more easily recognized than in ordinary practice. We are inclined to believe that a good diagnostician on the look-out for poliomyelitis will succeed in diagnosing a large proportion of these cases.

Assuming that we have made a diagnosis of poliomyelitis, or of probable poliomyelitis, what is to be our next procedure and what results can be expected?

It seems to us that the best treatment of poliomyelitis consists of spinal puncture to reduce pressure and get rid of toxic cerebro-spinal fluid and human convalescent serum intramuscularly.

It is obvious that our short series of cases is not an adequate basis for conclusions as to the value of convalescent serum. For this purpose we have interesting statistics from the Manitoba epidemic of poliomyelitis in 1928 and also from the Massachusetts epidemic in the same year.

In Manitoba, of 161 cases 74 received serum in the pre-paralytic stage of the disease, 54 received no serum, while 33 received serum too late to be of value, or after the onset of paralysis. Of 57 cases which received an average of 25 c.c. of serum intramuscularly in the pre-paralytic stage 93 per cent made a complete recovery. There were no deaths. Of 54 cases receiving no serum at all only 26 per cent made a complete recovery, 11 per cent died, and the remainder were paralyzed. Of those cases which received serum after the onset of paralysis 57 per cent became paralyzed before the fourth day. Only 22 per cent in this group made a complete recovery, 33 per cent died, and 45 per cent became paralyzed. It seems that the earlier the onset of paralysis the worse is the prognosis, and that after paralysis has occurred serum is of little value.

Reports from the Massachusetts epidemic in 1928 by Aycock and others showed that of the treated patients 5.7 per cent developed severe paralysis, as compared with 46 per cent of the untreated patients. One hundred and sixteen cases were reported. The outcome,



as measured by fatality rate, percentage of paralysis and so on, was strikingly better in the cases treated by serum.

We are much in favor of the use of human convalescent serum. Whether this is to be administered intramuscularly or intraspinaly seems to be a matter of opinion entirely. A supply of human convalescent serum is kept at Bell Memorial Hospital and at the Kansas City General Hospital. In case it is desired to prepare human convalescent serum it can be done without very much difficulty.

In the selection of subjects for bleeding, patients who have had acute anterior poliomyelitis, who have a residual paralysis, and who have been fever-free for a period of not less than three weeks are chosen by preference. Serum collected from convalescent patients on the twenty-first day after the temperature has become normal contains the maximum of immune bodies. Blood can be used, however, from patients who have had an attack of poliomyelitis a long time previously.

The blood is drawn in the morning before the patient has eaten. Blood is drawn into a large sterile bottle equipped with mouth suction apparatus such as is commonly used in collecting blood for transfusion by the citrate method. No sodium citrate is used, however, in this procedure. The blood is left at room temperature for one-half to one hour, then placed in the incubator at 37 degrees C. for one-half hour, after which it is put in the ice box over night. The following morning the serum is pipetted into large sterile centrifuge tubes and centrifuged for fifteen minutes. The serum is decanted to a sterile bottle, enough being saved out for a Wassermann test. The preservative is made by adding one part of tricresol to two parts of ether. 0.8 c.c. of this preservative mixture is added to 100 c.c. of serum. All cloudy serums thus obtained are rejected. The serums so prepared are cultured aerobically and anaerobically. Observations on the culture should be made as late as 72 hours before considering the serums culturally negative. The serum should be kept con-

stantly in the ice box in 10 c.c. stoppered bottles. From 10 to 25 c.c. may be given at one dose.

While relatively few control tests have been made with normal human serums, some recent investigations tend to show that normal human serums possess considerable power to neutralize the virus of poliomyelitis. While this work has not been completed, still the results are such that if one is unable to obtain convalescent serum it would seem justifiable to try the effect of normal human serum on the sufferer from poliomyelitis. In treating a patient 50 c.c. of blood may be withdrawn from the normal individual selected as the donor, this blood citrated, and then the whole blood injected into the gluteal muscle.

The occurrence of extensive and severe paralysis which quickly clears up or improves rapidly in a few days' time suggests that at least a part of the acute manifestations of poliomyelitis may be due to the effect of edema and swelling. Accordingly there have been some attempts made to treat this by administration of hyper-tonic salt solutions intravenously with suggestive results. Although we have never tried this, it seems logical, and one would probably be justified in working along this line or using 50 per cent glucose solution for this purpose.

We would urge that in cases which show evidence of meningeal irritation, especially in the presence of an epidemic, free use be made of spinal puncture, if a diagnosis of poliomyelitis can be made with reasonable probability that it is correct. The most earnest attempts should be made to treat the patient by every means available to prevent the onset of paralysis. Our most important measures are lumbar puncture, administration of serum and measures to reduce edema and swelling. In this way the best results will be obtained and our tragedies reduced to the minimum.

—R—

#### RELAXATIVES

The increase in wet sentiment should be a warning to bootleggers and hijackers. If they do not mend their ways, they will have their law taken away from them.—New Yorker.

### Notes On Pyelitis

NELSE F. OCKERBLAD, M.D., F.A.C.S.

Department of Urology

In all probability the usual conception of pyelitis, namely, that it is an infection confined to the kidney pelvis, is quite incorrect. Because of the fact that adults or infants rarely ever die of pyelitis, the opportunities to examine a kidney pelvis which has been diagnosed in life as pyelitis are very few.

The diagnosis of pyelitis is commonly made from the clinical findings and manifestations, such as pus in the urine, pain over the kidney region and an elevation of temperature, sometimes accompanied by chills and vomiting. Given this picture in a child, almost any doctor will diagnose "pyelitis." In view of these and other difficulties which beset the diagnosis of pyelitis, it is not to be wondered at that the general practitioner and pediatrician feels that if a pyelitis case does not clear up within three or four weeks some further investigation must be made to determine the pathology present. It is quite likely that, without obstruction, an infection of the kidney pelvis alone will produce only one finding, and that pus in the urine. Add obstruction, from stone, stricture, tumor, or from whatever cause, and immediately there is added another train of symptoms, namely, elevation of temperature, chills, leucocytosis, pain and vomiting. From this picture one gets the idea that one is no longer dealing with a simple affair like a pyelitis, but the filtering mechanism of the kidney is involved and we have a pyelonephritis.

For this reason I am convinced that the ordinary concept of pyelitis is not tenable and that true pyelitis is a fleeting disease incapable of long remaining confined to the kidney pelvis alone. If obstruction takes place then it immediately becomes a pyelonephritis. I believe we ought to call the cases that clear up readily under medication mild pyelonephritis cases; those that persist and have all the systemic signs and findings as fever, chills, leucocytosis and vomiting, acute pyelonephritis; and the ones that

persist over a long period, chronic pyelonephritis.

The present terminology of infections of the kidney is not at all clear. Mallory in his text "Principles of Pathologic Histology," covers pyelitis and pyelonephritis in the term infectious nephritis. Infectious nephritis is a very useful term and is truly based upon the pathological histology in these cases. It would seem then that the difference between pyelitis and pyelonephritis is a difference only in degree and in time. You are, of course, familiar with Cabot and Crabtree's theory of 20 years ago regarding kidney infections which is, briefly, that the colon-typhoid group attack the kidney pelvis first, having, so to speak, a predilection for the kidney pelvis, and that the coccus group likewise have an affinity for the cortex of the kidney. Their theory would seem to work out fairly well in practice and even now it has many adherents. Almost all cortical abscesses and perinephritic abscesses are of the coccus group it is true. It seems equally verified that the large majority of all infections of the kidney pelvis are of the colon-typhoid group, because of the fact that whenever cultures are made from separate urines and sent to the laboratory the routine report reads "colon bacilli found." However, this may be by using such culture media as suggested by Rosenow, Haden and others, namely, glucose-brain-broth which provides various grades of oxygen tension a surprisingly large number of these so-called colon bacilli pyelitis cases resolve themselves into infections by the well known streptococci.

From this it can be readily understood why some of us believe that the colon bacillus is not always the primary infecting organism but it is often the camp follower, so to speak. If this is true then we may account for the severity of the storm raised by such a disease as a so-called "colon pyelitis." It probably was not a colon bacillus infection that wrought the havoc, but that germ with the bad reputation, the streptococcus. I do not believe that there has yet been done enough painstaking work on bacteriology of pyelitis and pyelonephritis



to determine beyond peradventure just what the infecting organism is in every case or even what are the 3 or 4 commonest infecting organisms.

As to the etiological factors, because of the frequency with which colon bacilli have been cultured from so-called pyelitis cases the intestinal tract has been considered the largest and most obvious source and, therefore, the most likely focus possible.

Hunner is of the opinion that focal infections in teeth and tonsils produce metastatic lesions in the ureteral wall, which result in ureteral stricture, producing a stasis of urine behind it and thus furnishing the conditions for a kidney infection, pyelitis, pyelonephritis or pyonephrosis. I am quite sure there are cases in which both of these etiological factors operate to produce kidney infections. I am, however, firmly convinced that a not inconsiderable number of pyelitis and pyelonephritis cases have their origin in infections of the respiratory tract. There are more and better reasons for this idea than for the theory that they have their origin in gastrointestinal infections alone.

If my contention is true, that the colon bacillus is not the primary organism but merely a camp follower upon the heels of the streptococcus, then the case for the respiratory tract becomes stronger. The bacteriology of influenza is still unknown, but it is suspected that a streptococcus may be the real basic cause for most severe respiratory infections. These respiratory infections may be mild, as in the common cold, or severe and serious as in the so-called influenza or in pneumonia. In any event it cannot be denied that even in the milder cases we have a blood stream infection. In the more severe cases of respiratory tract infection the blood stream infection is more prolonged and the infecting organism is more virulent.

The general public has curious ideas as to how to treat a cold, or what we term a respiratory tract infection. More than half of the persons thus afflicted will proceed as follows: (1) Take some drastic purgative, (2) load up on some hot fluid like hot lemonade or some hot

toddy, if obtainable, (3) take a hot bath and (4) go to bed. The only rational part of this procedure is the "go to bed" part. Everything else is calculated to disseminate the bacteria and their toxin to every part of the body in the shortest possible time. It not infrequently happens that two or three weeks later, when this cold has passed away, the patient having almost forgotten the incident, comes down with another fever, sometimes ushered in by a chill and severe prostration and accompanied by pus in the urine. This is an acute pyelonephritis, beyond the shadow of a doubt the result of the respiratory tract infection. So I feel rather strongly that the respiratory tract is responsible for more kidney infections than the intestinal tract.

In thus stressing the respiratory tract, I am not overlooking the importance of the focal infections in tonsils, teeth, sinuses or in the skin. The role that such infections play is so well known that it needs no further reiteration.

The diagnosis of pyelitis or pyelonephritis is not always easy. It may be quite true that a patient may have the pyelitis symptoms and findings and clear up readily under simple rest in bed, ample fluids and suitable medication. On the other hand, a patient with identical symptoms will not respond at all to such therapeutic measures. A complete urological examination is then necessary to determine the cause of the continued pus in the urine.

In the treatment of this disease it is necessary to clear up all focal infections and put the patient in the best possible physical condition. One must not overlook the fact that obstruction of the ureter, either partial or complete, because adequate drainage of the kidney is prevented may be an important factor. Before the time that physicians made routine microscopic examinations of the urine many of these cases passed for typhoid fever or malaria or pneumonia, if there happened to be a few rales in the chest. Undoubtedly some of these pyelonephritis cases run a course and clear up, though I believe this to be the exception rather than the rule.

Certain cases appear to have a residual focus within the kidney itself or beneath the capsule which at intervals lights up and produces a periodicity which is very puzzling and difficult to combat by ordinary means. It is very important to know that every case of pus in the urine is not pyelitis. Even in children it is not safe to make a diagnosis of pyelitis because of pus in the urine. As a tentative diagnosis it may be well enough, but if the pus persists longer than three weeks, when ordinary remedies have been applied, then it is time for a complete urological examination to determine the cause of the persistent pus in the urine.

You are, of course, familiar with the classic descriptions of the routes of invasion in kidney infections, namely, through the blood stream, by the lymph and the ascending route.

From the foregoing you may be impressed with the idea that I have stressed the blood stream method of infection and perhaps so I have. The direct, or ascending route is also a factor and the work of Gruber has recently given us some reason and ground by the experimental evidence he has presented.

As early as 1902 Forssner showed experimentally that when streptococci are grown in kidney extracts they have a special predilection for the kidney when injected intravenously.

In 1911 LeFur introduced different organisms into the bladders of animals for the purpose of producing ulcers. He observed that although streptococci, staphylococci and other organisms were originally injected into this viscus, the *B. Coli* was the only one subsequently recovered in the urine. He emphasized the fact that the *B. Coli*, which is so commonly found, and believed to be the cause of infection, is a secondary invader of mere importance as a natural inhabitant of the urinary tract. This apparently overlooked bit of experimental work of 20 years ago tends to prove what we have learned from clinical experience.

In conclusion we may lay down the following principles gleaned from the

clinical study of many hundreds of the so-called pyelitis cases.

1. That in all probability there is no such thing as a pure pyelitis for even though the disease may begin as such it quickly invades the kidney and becomes a pyelonephritis or infectious nephritis.

2. The bacteriology of the disease is not settled; the streptococci may be at the bottom of more of these cases than we now believe.

3. Respiratory tract infections play an important role in pyelonephritic cases.

4. There may be a residual focus within the kidney cortex or beneath the capsule which lights up and produces a puzzling periodicity.

5. All persistent pus-in-the-urine cases must be investigated thoroughly to determine the site of the trouble and if possible the cause.

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### Dermoid Cyst of Ovary Combined With Large Pseudomucinous Cyst

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Pseudomucinous cysts of the ovary constitute a large part of gynecology. To Ephraim McDowell goes the credit for successfully instituting surgery in the treatment of this condition, and so much progress has been made in the last quarter century that rarely are ovarian cysts allowed to reach spectacular proportions before being removed. The chief complaint in the majority of these cases originates from pressure.

Dermoid cysts of the ovary are encountered much less frequently, and rarely does the host seek relief from pressure symptoms. The complaints usually originate from adhesions to surrounding organs or as a result of spontaneous rupture of the cyst wall.

The combination of the two types of cyst in the same ovary, according to both Graves and Crossen, is "not infrequent" and usually the dermoid is found incorporated within one of the multilocular chambers of the main cyst sac.

The following case is considered of interest because of:



1. The unusual proportions of the cyst.
2. The combination of dermoid cyst and pseudomucinous cyst in the same ovary.
3. Points of management necessary in the successful removal of large abdominal tumors.

#### CASE REPORT

This patient, a married colored woman of thirty-nine, was first seen May 14, 1930, seeking relief from edema of the lower extremities and shortness of breath. Her past history was essentially negative both by name and symptoms. The menstrual history is not remarkable, menstruation starting at thirteen, of usual regularity and duration. She has four children living and well. There had been no other pregnancies.

Her only illness began about four years ago, soon after the birth of her last child, when she first noted an increase in the menstrual interval and a decrease in the actual amount of flow. This continued, with little other disturbances, until about five months ago, when her abdomen began to enlarge rapidly. Since it was associated with nausea and vomiting, she considered herself pregnant, although no other associated symptoms of early pregnancy were present. About six weeks ago she began to have edema of the lower extremities. Soon thereafter she became short of breath and began to have sharp pains across her lower abdomen, particularly following exertion. Curiously enough, she insisted that she began to feel fetal movement about two months ago, which continued for a period of about six weeks,

but none had been perceptible for the last few weeks.

At her first examination definite diagnosis was not made, feeling that it was some question whether this was a pregnancy complicated with hydramnios, or an ovarian cyst. She was seen at subsequent and short intervals until she was finally operated August 1, 1930. She had been encouraged to be operated at her first admission and on subsequent visits, but had persistently refused until she was entirely disabled by a huge abdominal tumor which had stretched the skin to glistening tightness, had flared out the costal margins of the thorax, had caused incontinence of urine, had produced enormous edema of the lower extremities up to the groins, had made it impossible to lie down flat, and had grown to such size that she could scarcely turn her body in bed.

#### OPERATION, DESCRIPTION AND COMMENT

Preliminary medication consisted of morphine and scopolamine. The abdomen was opened under local anesthesia of  $\frac{1}{2}$  per cent novocaine. The incision was made to excise an elliptical area, including the umbilicus and extending from about three inches below the xiphoid to one inch above the symphysis pubis, this being done in order to take up the slack from over-distention. One of the multilocular cysts was opened accidentally but fortunately the content of the chamber was of jelly-like consistency and its escape could be controlled with little difficulty, allowing the abdomen to be emptied gradually, consuming a period of about forty minutes. It was necessary to administer gas oxygen anesthesia for abdominal exploration and

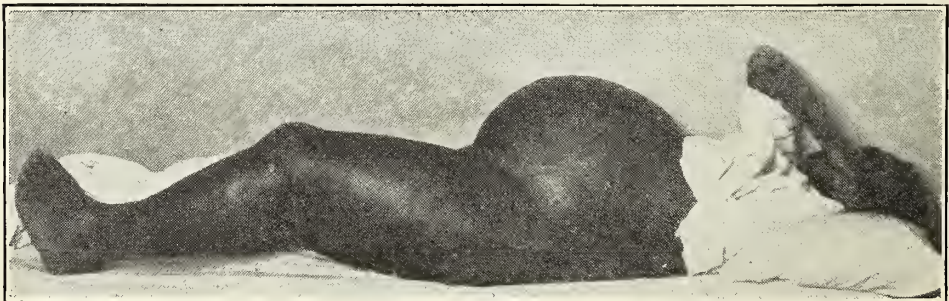


Figure No. 1  
Picture Taken Before Operation

the table was placed in Trendelenberg position to avoid shock which might follow the release of intra-abdominal pressure. Upon attempting to remove the cyst, its wall was found plastered by pressure to both the visceral and parietal peritoneum wherever it made contact throughout the abdominal cavity. It was peeled off with little difficulty, leaving no bleeding surfaces, as it seemed to be merely agglutinated rather than actually adherent. Once mobilized, the cyst was

toneal cavity before the removal was completed, but this was assiduously sponged out at once. The abdomen was closed in layers without drainage. A large pillow was then strapped tightly over the abdominal dressing and she was given, prophylactically, 600 c.c. of citrated blood before leaving the operating table. At no time during the operation did she show evidence of shock.

#### PROGRESS NOTES

Her daily progress was essentially satisfactory throughout. The abdominal pressure being loosened gradually from day to day until finally the pillow was removed from the dressing and the elevated bed returned to a flat position. No doubt her enormous edema supplied body fluids that otherwise would have had to be administered. On the fifth postoperative day, she was given 500 c.c. of 10 per cent glucose, which produced a chill but thereafter she continued to make rapid progress. On the twelfth day the skin clips were removed, as the incision had healed by primary union. She was dismissed, after being up and around the ward, on the fifteenth postoperative day.

Several interesting features presented themselves in the postoperative course. First, upon recovering from the anesthesia, she was unable to adjust her respiratory rhythm. The removal of the obstacle of increased intra-abdominal pressure contributed to hyperpnoea and a feeling that respiration would not continue automatically. By the third day this discomfort had entirely passed. As a result of elevating the foot of the bed for the tremendous leg edema, a pulmonary edema was produced but fortunately was recognized early. Ileus and general peritonitis, the conditions most feared in view of the extensive visceral manipulation, were conspicuous by their absence. Also, the bladder, which had been incontinent for weeks from pressure, began to function at once, although caution was used lest it become over-distended. When the ambulatory stage was reached, the patient was compelled to readjust her equilibrium, as she had a tendency to fall backward. Her sense of

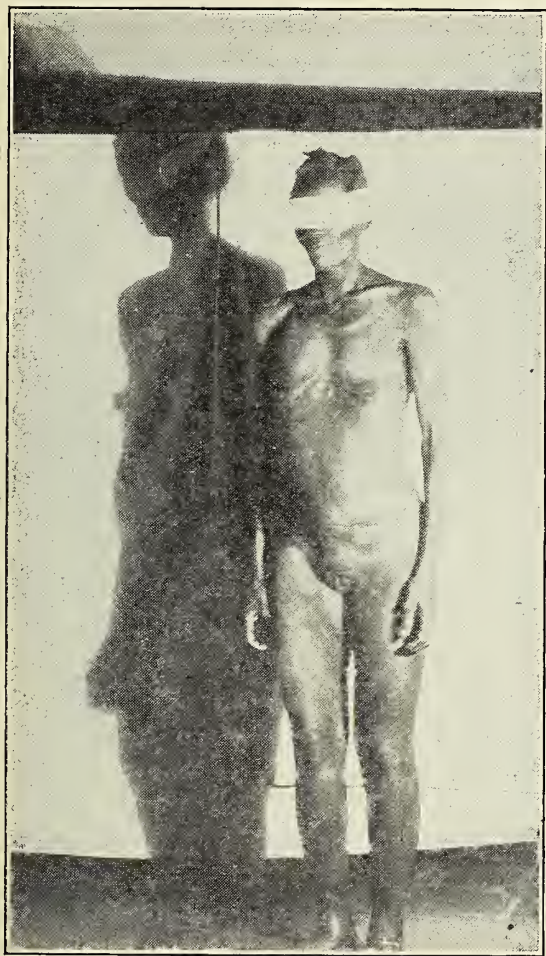


Figure No. 2  
Picture Taken After Operation

found to be connected by a broad pedicle to the right broad ligament and embraced the whole right ovary. All other pelvic organs were normal. The stump was ligated and the cyst removed in the usual manner. Unfortunately, a considerable amount of the pseudomucinous contents had been spilled into the peri-

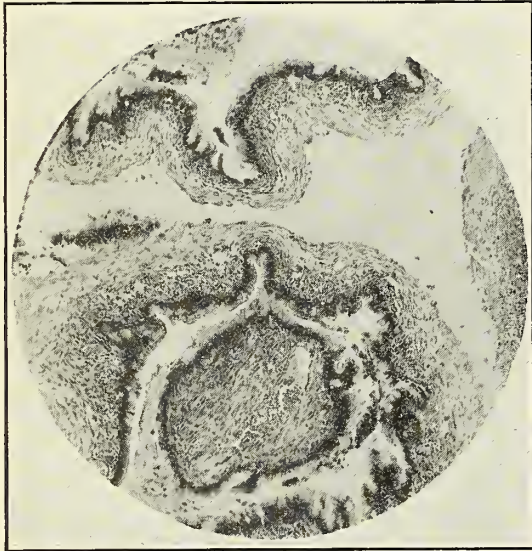


balance had been disturbed by removing the weight of the tumor.

The accompanying photographs show the patient before and after operation.

GROSS PATHOLOGY

Large tumor mass measures 65 by 45 by 9 cm. which is made up of numerous large and small locules with a fairly smooth surface, to which are attached fibrous adhesive tags in several areas on the postero-lateral aspect. The pedicle, measuring 8 cm. broad and  $\frac{1}{2}$  cm. in thickness and 3 cm. in length, is quite vascular, containing several large blood vessels. On section, the cyst is found to be multilocular with locules varying from 1 to 24 cm. in diameter and with walls measuring from 1 to 5 cm. in thickness.



Micro-Photo No. 1

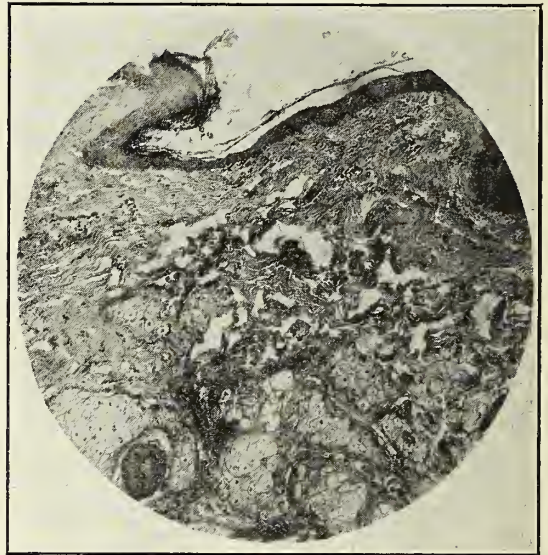
In some of the larger locules the walls are translucent and the color of the content is readily seen, while in others the walls are thick and opaque. The contents of these locules, for the most part, are pseudomucin but in some locules a more watery and hemorrhagic content is noted. The material, measuring 17,000 c.c. has a specific gravity of 1.040. It is estimated that an additional 3,000 c.c. of the material was lost at operation.

Incorporated in the above tumor mass, adjacent to the pedicle, is a very different mass which is hard, thick walled and of a yellow color. It is spherical and measures 6 cm. in diameter and on sec-

tion contains sebaceous material and hair. In one wall is a projecting area of skin with a small spicule of underlying bone. A tuft of hair springs from this skin area.

HISTOLOGICAL PATHOLOGY

Section through the cyst proper shows cyst cavities lined by tall columnar cells with basal nuclei. In some areas papillary projections are seen extending into the lumen but the cells remain in a single layer with an orderly arrangement of the basement membrane. In some areas the epithelial cells are desquamated into



Micro-Photo No. 2

the lumina. The stroma is cellular and the cells are large and vesicular. Blood vessels are fairly numerous. In some areas the stroma takes on the appearance of ovarian tissue. (See Micro-photo No. 1.)

The section through the dermoid has a typical appearance. The cavity is lined by stratified squamous epithelium containing hair follicles and numerous sebaceous glands. The stroma is quite typical. (See Micro-photo No. 2).

PSEUDOMUCINOUS CYST

Characteristics	91 cases (Graves)	Our case
Age of incidence	46.1% between 40-55 years	39 years
Known sterility	17.9%	4 children
Abnormal menstruation	41.7%	Irregularity
Symptoms due to tumor direct	76.9%	Multiple



Occurrence of malignancy	17.5%	None
Bilateral occurrence	3.2%	None
Tumor adherent (easily separated)	43.9%	Extensively
Opposite ovary entirely normal	90.1%	Yes

**DERMOID CYST**

Characteristics	77 cases (Graves)	Our case
Age of incidence	63.6% between 20-40 years	39 years
Known sterility	10.1%	4 children
Symptoms directly due to tumor	54.5%	None
Average duration symptoms	3.72 yrs.	None
Malignancy	None	None
Associated with ovarian cyst	10.4%	Yes
Menstrual complaints	None in 57.8%	Yes, irreg- ularity
Results	Uniformly good	Good

We wish to express our appreciation to Dr. L. A. Calkins, Chief, Department of Obstetrics and Gynecology, for permission to manage and report this case.

R

### Myxedema—Difficulties of Diagnosis— Difficulties of Treatment

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You probably will react with a distinct feeling of ennui when you find that this lecture is to be conducted on the worn subject of myxedema. For most of you, the information about this disease is well crystallized; you regard the diagnosis as more or less self-evident and the treatment as entirely stereotyped and specific.

But my reason for presenting a case of this disease is to emphasize two points. First, the difficulties of diagnosis and, second, the difficulties of treatment. Nor is my thesis the time worn one of the *formes frustes* of myxedema, the incipient or incomplete myxedemas, the abortive forms. The most frequently missed cases are those in full flower, completely developed, frank cases. Nor are these missed diagnoses made by incompetent men. As I shall show you they are made by professed specialists in diagnosis, and the most careful and painstaking diagnostic clinics.

This patient, a woman, is 46 years old. She has a daughter and a young grand-

daughter; her husband is living and well. She has been in the climacteric for three years, and still menstruates irregularly and scantily.

The history of the case is very vague. This is a regular feature of such cases and an important cause why the diagnosis is not made. These patients talk slowly and think slowly and cannot give a clear short history. Most physicians nowadays do not have the time to listen out a myxedema patient's story.

The relatives of this patient have not been interviewed. It is usually from



Face of Patient With Myxedema

them that the best history is obtained.

The principal complaint is fatigue. A peculiar kind of fatigue. A fatigue of utter listlessness. She has lost some hair around the forehead and has acquired a peculiar brownish-yellowish tinge to the skin. She has not gained any weight, and is, you see, fairly emaciated. She is frequently nauseated, and mentally depressed.

Physical examination should make the diagnosis but we are deflected on the

A clinical lecture delivered at Bell Memorial Hospital before the Southwest Clinical Conference, October, 1930.



threshold of examination by the finding first of albumin and casts in the urine, second of a low red blood cell count, and the report of pernicious anemia from a clinical pathologist.

It is indeed unfortunate that the diagnosis was given away in the title because it would have been possible, I believe, to present the findings as those of nephritis or of pernicious anemia and to persuade you of the validity of those diagnoses.

The pigmentation, the changes in the skin, the infiltration of the skin, is suggestive of any of them and leads to error unless myxedema is constantly remembered as a possibility in middle-aged people, especially women.

The classical sign of increase in weight is not present in this patient and there is only a slight amount of myxedematous infiltration in the skin.

The quality of the hair is a matter I do not feel so confident about since a cynical interne cut off some hairs from normal and myxedematous patients and also cretins put them on individual sheets of paper and asked a group of staff members to identify the coarse hair of the hypothyroid patients. The attempt was not conspicuously successful.

The basal metabolism has been persistently minus thirty or below, a most reliable diagnostic sign. A metabolic rate of minus ten or minus twenty is of no great significance but more than that is certainly diagnostic.

Fahr has drawn attention to a myxedema heart. It is characterized by enlargement of all four chambers, slow pulse rate, a normal blood pressure and electrocardiographic changes. This patient has a large heart, a pulse of 70, and some notching of the QRS wave. I do not see that the cardiac changes of myxedema are very specific. The patients are middle-aged and arteriosclerotic usually and we would expect some such changes.

Chaney, of the Mayo Clinic, has studied the tendon reflexes in the disease. "In myxedema" he says, "the tendon reflexes produce such slow movement of the parts that the quality can

be recognized without the aid of mechanical devices and is a valuable sign in diagnosis." This is natural in view of the general sluggishness of the nervous system in myxedema. The reflexes in this patient, however, are rapid.

Looking over the whole clinical picture—getting a general view of the entire patient—we see that there is not only a deficiency in the secretion of the thyroid gland causing changes in the general metabolism, the nervous system, and the skin and its appendages, but also a general vascular change, with renal degeneration and a secondary anemia of high grade. These widespread changes must be grasped in order to understand the pathologic physiology of the disease, and also the mistakes which arise in diagnosis.

The frequency with which myxedema is overlooked may be illustrated by two pieces of concrete evidence which speak for themselves. They should be examined in an attitude of prayerful meditation.

Dr. C. C. Sturgis, Professor of Medicine at the University of Michigan, told me that he went last summer to visit his home town in Oregon. He entered the general store in the village and the proprietor, an old friend, came forward to greet him. One glance at him was sufficient to establish the diagnosis of myxedema.

"You've been sick, haven't you?" Dr. Sturgis asked the proprietor after the preliminary greetings were over.

"Yes, I have," the man agreed, speaking very slowly, "and nobody seems to know what's the matter of me."

"What kind of treatment have you had?"

"Well, I went to a diagnostic clinic in the city and they had a surgeon take my gallbladder out, but it don't seem to have done me any good," and then he went on at a deliberate pace to recount his troubles.

"I believe I can help you," said the doctor.

"I believe you can, too—because you're the first doctor that's had time to listen while I said everything that's on my mind."

The second piece of evidence is a letter from a patient with myxedema sent to a doctor and printed some years ago in the Archives of Internal Medicine.

"I must apologize for not writing for so long, but my time is taken up, it seems to me, and I hardly know how I spend my time. It has been a year now since I left the office and began doctoring and I do not see that I am one bit better. Have been to two specialists for my nose, throat and palate. They both said the palate and vocal cords were partially paralyzed. My tongue is also much swollen, which hinders my talking to some extent. They sent me to a specialist on the eyes, and he sent his report to Dr. ——. They had me examined by some kind of a specialist who examined, I believe, every nerve and organ in the body. He reported to Dr. — while I was there, and I heard a good deal. He thought it was Bright's disease. But Dr. — thought not as he had been keeping his examinations up so carefully. Then the other doctor said it was a tumor at the base of the brain, and wondered I had never had the headache or convulsions, or had never been unconscious. I am still a bad color, I still swell sometimes; my breath is dreadful. Have a rash over my body which looks like warts. I feel all right while in the house, but when I go out I feel very tired, especially walking up hill. I am still getting stouter."

Treatment is also a matter of more difficulty in myxedema than one would be led to expect. The condition is due to atrophy of the thyroid and deficiency of its secretion and, therefore, all one has to do is give the patient thyroid extract. So thinks the blithe novice in practice. But when one actually begins to give thyroid extract the patients frequently experience different kinds of accidents which are unpleasant and even actually terrifying.

The commonest of these are attacks of angina. One patient said she could get along pretty well if she walked slowly until she began taking the medicine, and then she had such pain in the heart she could hardly go more than a few steps. In fact, so annoying was this that she

left off taking the drug entirely. The explanation is clear when one remembers the crippled circulatory system and the anemia. Thyroid extract is a powerful cardiac and vascular stimulant and cannot be forced indiscriminately on a weakened circulatory apparatus. The anemia also plays a part. The impoverished blood does not bring enough oxygen to a myocardium whipped up to a pitch of extra endeavor. The treatment, therefore, does not consist in simply exhibiting a specific remedy to a patient in sufficient quantities to restore the patient to normal. The whole patient— anemia, heart, nervous and digestive systems—must be considered and treated.

The form of thyroid medication to use is the whole extract of the gland. Differences in opinion as to the structure of the thyroxin molecule are represented in the divergent formulae of Kendall in America and Harrington in England. Thyroid secretion is probably more complicated than we suppose and until further knowledge is at hand the whole gland substance should be used. The procedure is wisely divided into (1) the initial dosage and (2) the maintenance dosage—two separate stages in therapeutic application. Neither can be determined except by trial on each individual patient. The average initial dosage—that is, the amount that is required to raise the metabolic rate to normal, and make the patient subjectively comfortable, with a feeling of warmth and a loss of weight—is from 2.3 gm. to 6.5 gm. The maintenance dosage has been found to be from .13 gm. (2 grain) a day to .195 gm. (3 grains) a day.

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—R—

Mr. Warburg, New York banker, says business revival needs the help of psychologists and not economists. Perhaps a few buyologists would help.—*Brunswick Pilot*.

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According to a psychologist, people are most intelligent at the age of fourteen. Before they go to college.—*Louisville Times*.



## Fractures of the Femur

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The Workmen's Compensation Laws which exist now in practically every state are having their effect on the treatment of fractures. This influence is, in my opinion, going to be beneficial. Better and quicker results are being demanded by the insurance carriers and every industrial case that sustains a fracture of any magnitude is going to be reviewed by the Workman's Commission and incidentally will often be passed upon by other physicians. This procedure has certainly been a stimulus to all doctors to attempt to do better work. No one is desirous of having bad results publicly displayed and everyone therefore strives to produce as commendable exhibit as possible. However, end results are often misleading without due consideration of the circumstance that existed during the time of treatment, and the physician is not always able to control these circumstances, therefore, we should be careful and not be hasty in our criticism of results of our brother practitioners. It has been my observation that as a rule doctors are too much inclined to cast reflections about the character of some other doctor's work and no doubt the germ of a malpractice suit is often sprouted by such remarks.

If we are to meet the demand that is being made for better results and less time off duty in the treatment of femur fractures we will be required to improve our methods somewhat. This means that we must take advantage of every opportunity that will hasten the union of a fracture. Early reduction, control of infection and as accurate alignment as possible are all factors that determine the outcome. All fractures should be reduced as soon as possible. Of course the life of the patient comes first but when the shock is controlled attention to his fracture comes next. In this discussion fractures of the neck of the femur will not be considered.

In compound fractures efforts should be made to clean up the wound so that infection will not occur rather than wait-

ing to see if the wound is infected. If every compound fracture, where the wound is of any size, is carefully and continuously scrubbed for twenty minutes with tincture of green soap and water and then debrided within eight hours after injury there will be very few infected fractures. It is true the small punctured wounds made by fragments of the bone piercing the skin can be ignored in most cases, but the big open wounds can not. The recent compound fractures that are not seen until infection has begun can be sterilized by the application of moist alcohol packs, applied continuously with some pressure under an oiled silk dressing. I think that Dr. L. E. Evens, who is with the Aetna Life Insurance Company, has demonstrated that an alcohol dressing that is kept continuously moist by means of injecting alcohol with a medicine dropper through holes in an oil silk covering will clear up infection in any of the soft tissues in forty-eight to sixty hours.

After the wound in compound fractures has been cleansed, extension should be applied and the greater the damage to the soft parts the greater the need for extension and splinting. The Thomas or Hodgens splint can be used in these cases but I think the new Boehler's splint makes it easier to secure adequate extension. I never saw a case of a fractured femur that was harmed by too much extension. In maintaining apposition in compound femur fractures no foreign material should ever be used, in my opinion, except possibly a drill or metal pin for a few days, until the extension gets control of the muscle spasm. The keynote therefore in compound femur fractures is sterilization of the wound and adequate extension.

The management of fractures of the femur depends on the location of the fracture and the time that has elapsed since the fracture occurred. In the upper third, not including the neck, recent or old simple fractures should be wired and then have some kind of fixed extension with a plaster cast. If you don't wire them or put on some other form of internal fixation you will have difficulty

maintaining apposition and if you don't use extension you will have outward bowing that is often markedly disabling. This is true for both adults and children.

Recent fractures in the middle of the shaft of the femur can easily be held with simple wiring and the application of a plaster cast without extension. Fractures that have gone unreduced for ten days or two weeks should be wired and have fixed extension. If the inelasticity of the infiltrated muscle is allowed to pull against the ends of the bones delayed union is likely to occur and may result in nonunion. Fixed extension can be secured by incorporating the ends of the adhesive plaster in the cast by turning them back over the plaster and applying another plaster bandage or by a rustless steel nail or Steinman pin placed through the bone and incorporated in the plaster cast. Fractures of the lower third of the femur that are displaced require skeletal traction. The Pierson ice tongs placed just above the condyles with the traction made over a new Boehler's splint is probably the best method of maintaining reduction and preventing the distal fragment from dislocating posteriorly. Fractures in this area that have gone unreduced for a week or more often require open operation to secure apposition but rarely require any form of internal fixation when skeletal traction is used.

Fractures of the femur in children under five years of age rarely if ever require any form of internal fixation. Good anatomical and functional results can be secured by overhead (Bryant's) extension with manipulation. It should be remembered that not even contact is required to secure union and good results in children. Above five years of age much the same management should be used in children as has been outlined for adults.

It will be observed that I have not mentioned bone grafts or intramedullary pegs and in my opinion they should be reserved for the treatment of non-unions and are not satisfactory agents for maintaining apposition in fresh fractures. They often break just at the time when stabilization is required, namely,

when joint motion is started and allow marked bowing in spite of splinting.

Lane plates have a usefulness and are not to be condemned, however, the application of wire is much simpler and more easily done than applying a Lane plate. Through a small incision the fracture is exposed and a hole drilled through the cortex of either fractured end and the wire passed through, the fracture reduced and the wire tightened only moderately tight, so that a degree of motion is permitted which will prevent the wire breaking. The wire should not encircle the bone and should only go through one cortex. Callus forms much more rapidly than when a Lane plate is used. The cast is removed at the knee in five weeks and motion started and the patient allowed up on crutches in six weeks, into a Caliper brace in eight weeks and back to light duty in twelve weeks.

In conclusion I would like to make a plea for the management of fractured femurs along the lines mentioned. To try out all suggested plans is a waste of time and effort. Few of us are permitted to have an opportunity to try the different methods and find out for ourselves their short comings and if we can accept a plan that has been tried and proven workable and on the whole superior to other methods a plea for its adoption should be worthy of consideration.

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### Water and Salt In Surgery

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It is quite self evident that the tissues of the human body cannot properly function if there is a deficiency in the essential elements that make up its elaborate chemical properties. No one pretends to know all of the many chemical reactions that take place in the body laboratory. Some of the essential elements of the body are quite well known, and their proper adjustment has a definite bearing upon our routine therapy in many diseases. I believe that it may be accepted as a true statement that there is no therapy so logical as that which has to



do with the substitution in the body of elements that are lost by or during the course of disease.

In health, water exists in the body in balanced quantity and is quite constant. This normal balance of the water in the body existing in health should suggest the thought of re-establishing such a condition in disease. Water is capable of absorbing large quantities of heat, thus preventing high temperature rises in the cells. Water, because of its fluid nature, is capable of distributing the heat equally throughout the body and carrying the excess to the surface where it is given off. Water then acts as a buffer in high temperature changes and as a vehicle of heat within the animal body. A certain quantity of water must be present in order that chemical reactions may take place. Blood becomes concentrated in fever and there is thirst. Water may be held in tissues in some unknown way, and heat regulating mechanism disturbed. It is notable that there is often a remarkable flow of water from the kidneys following crises of pneumonia, as if water had been bound in the tissues.<sup>1</sup> It may be said in fevers that there is a deficit of the so-called "free" water as opposed to the bound water.

In recent years the importance of sodium chloride in the normal functioning of the body has been emphasized. A number of years ago it was discovered that there was a decrease in chlorides in the blood and urine of pneumonia patients. Just what becomes of the chlorides has never been satisfactorily explained. The rapid return to normal of the chlorides as the patient convalesces from pneumonia indicates that they are retained in the body. Why this apparent shift in chlorides occurs is not known, but it is at least suggestive that they may be part of the body protective mechanism in a serious disease.

In health, the chlorides maintain quite an even balance in the body. Sodium chloride is necessary for life. Changes in this salt are usually somewhat parallel to the change in the water content of the body. In fact, the two are so closely associated that they should be considered together.

The interesting work of Underhill<sup>2</sup> and his associates on the changes of the blood in extensive superficial burns is very illuminating. They have found that the blood becomes highly concentrated, the hemoglobin percentage reaching as high as 200 in some cases. In spite of this concentration of the blood the chlorides are reduced as noted by Davidson.<sup>3</sup> It is here then quite logical to assume that the supply of water and salt may be beneficial in the treatment of burns. Such is surely the case as demonstrated by both of these authors. Underhill notes that the forcing of fluids in burns relieves delirium unconsciousness, gastrointestinal disturbances, albuminuria and hemoglobinuria. A decrease in the blood concentration is of prime importance in the treatment of burns. In acute intestinal obstruction the restoration and maintenance of water and sodium chloride balance is fundamental. In this disease, both may be lost in large quantities. Coincident with this loss there is a change in the constituents of the blood which indicates the extent and gravity of the disease. There is an increase in the non-protein nitrogen, and in the high obstructions an increase in the carbon dioxide combining power. The administration of salt solution will tend to reduce these changes to normal. No other known solution has this tendency. Glucose solution or distilled water have no effect upon the progress of intestinal obstruction as far as restoration of water and chemical balance is concerned. It is then seen in this disease that both water and salt are essential to produce internal body equilibrium. Acute intestinal obstruction illustrates in an extreme degree the importance of supplying water and sodium chloride in the body. This being true, it is reasonable to believe that a normal balance of water and salt should be maintained in such conditions as pyloric obstruction, peritonitis, paralytic ileus, toxic states with vomiting, and pre and post operative states when water by necessity has been restricted. In this class of cases it is of extreme importance that the necessity of water and salt balance be appreciated, since by the prompt supply of an ade-

quate quantity of these essentials much of our postoperative worry and distress of our patients may be averted.

In the supply of water and salt more than a hazy notion of the necessity of such treatment is imperative. It is not sufficient to say that patients should have salt solution, but each patient's need must be carefully analyzed and an adequate supply furnished. This is where judgment and careful laboratory work play their roles. Judgment tells you the needs of a patient from the clinical standpoint and suggests when to resort to the laboratory for support. A little experience will tell you that a patient is depleted of water. If water is not being taken by mouth in normal quantities in ill patients, attention should be given at once to the parenteral administration of water as sodium chloride or glucose solution.

Rowntree<sup>4</sup> made the interesting observation that dogs could be intoxicated by giving them large quantities of water. This condition is hardly to be anticipated in the treatment of patients. Such symptoms could not be produced by physiologic salt solution. The symptoms of water intoxication can be relieved by the administration of hypertonic salt solution. Distilled water is not advised to restore water balance in disease.

The untoward reactions to excessive quantities of salt solution are edema, albuminuria and possibly embolism and thrombosis. It is also quite probable that the circulatory system may suffer in certain cases of myocardial weakness if excessive quantities of liquid are given rapidly by the intravenous method.

Experimental dehydration results in increased viscosity, increased N.P.N. and urea nitrogen, increased chlorides, increased total protein and increased fibrinogen in the blood. The significance of such changes in any degree in clinical patients should be evident from these findings. It must be assumed that the body functions are greatly disturbed by such deviations from the normal. Keith<sup>5</sup> mentions dehydration as an important factor in Asiatic cholera, dysentery, acute anhydremia of infants, upper intestinal obstructions, pyloric obstruc-

tion, pernicious vomiting of pregnancy, obstructive jaundice with vomiting, uremia and diabetic coma.

Hartwell and Houget<sup>6</sup> first noted that lives of animals with intestinal obstruction could be prolonged by giving salt solution. They gave the credit to water and overlooked the importance of salt.

It is not the intention to discuss here the acid-base balance of the body, but it seems important to mention in this connection the findings of Edmund Andrews.<sup>7</sup> He noted that the quantity of water, possible to cause a dog to excrete, by intravenous injection of hypertonic glucose or salt solution is directly proportional to the alkalinity of the blood. The greater the alkalinity of the blood the greater excretion of water produced by hypertonic solutions. This observation should be carefully noted by clinicians to determine if it has any true value in treatment.

According to McLean<sup>8</sup> "it is a truism that equilibrium in the physico-chemical sense, occurs in the organism only in death. The condition of balance between varying, shifting and opposing forces, which is characteristic of living processes in general, is variously spoken of as a "dynamic equilibrium," a "correlated state" or a "steady state." The condition of edema has to do with water balance of the body. The fundamental problem is that of the physiologic regulation of the volume of the internal environment, including the blood and tissue fluids. Edema is not an entity but a symptom just as dyspnoea, and results as a disturbance of the regulating processes.

#### CONCLUSIONS

In the treatment of dehydration, especially when associated with vomiting, glucose solution should not be depended upon as a sufficient treatment. Sodium chloride is a necessity in the maintenance of water balance.

Tap water or distilled water should only be given by mouth or rectum in the treatment of dehydration.

Too much sodium chloride may be given and edema produced. Chemical studies of the blood are of value in estimating the quantity that should be used.



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## The Hemoglobin Standard

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The other day we measured, with great care, the hemoglobin content of my own blood. At eight o'clock in the morning I was anemic, at noon almost normal, by six o'clock in the evening the hemoglobin content of my blood was a full 100 per cent. A few days later we determined the hemoglobin content of the blood of a big, energetic and athletic looking, medical student at the University. At eight o'clock in the morning his hemoglobin content was 128 per cent, an hour later, after breakfast, it had fallen to 100 per cent, at one o'clock in the afternoon it was up to 126 per cent. Had I gone to consult a doctor on the morning that my hemoglobin was determined at the laboratory he would in all probability have prescribed a blood building tonic for me, had I waited until afternoon or evening he would have told me that I was in fine condition, never more normal in my life than at just that moment. On the basis of laboratory findings the medical student just referred to would have to be classed as a super normal individual, so far at least as hemoglobin values are concerned—a condition very hard to justify in fact and totally unnecessary to assume in theory.

Now the methods used in determining the hemoglobin in the experiments just quoted were not crude or inaccurate, nor was the technique careless or in any way at fault. Two of the most exact hemoglobin methods known, the oxygen capacity method and the Wong sulphocya-

nate method, were used and duplicate checks were made with each method making quadruplicate runs on all of the analytical procedures. The blood used was drawn directly from a vein and mixed with scrupulous care before being pipetted. The variations found were due rather to a variety of physiological factors of unknown origin collectively called, at present, for want of a better name, diurnal variations.

The fact that large diurnal variations occur in the hemoglobin content of healthy men and women has been known for a long time. Dreyer, Bazett, and Pierce,<sup>1</sup> in 1920, working at Oxford University, report diurnal variations in the hemoglobin content of men and animals as high as thirty per cent. In 1923 Rabinovitch,<sup>2</sup> working at the Montreal General Hospital, reported maximum diurnal variations of hemoglobin in healthy individuals as high as twenty-six per cent. We are reporting elsewhere, from this laboratory, the results of a large series of similar values on apparently healthy men and women confirming, in this country, the results obtained by the English and Canadian investigators just quoted.

The causes of diurnal variations in the hemoglobin content of blood are at the present time very poorly understood. Previous workers in this field have connected them with such variable factors as pulse rate, blood pressure, rate and volume of respiration, fluid absorption and kidney secretion, with the effect of cold on capillary circulation. Barcroft<sup>3</sup> has recently considered the contraction of the spleen, following hemorrhage and exercise, as an early and useful, but not indispensable, "fine adjustment" of the body tending to add to the blood volume. The regulation of the quantity of the blood, both as to erythrocyte count and hemoglobin value, by lienal contraction, following such conditions as asphyxia, work, and exercise has also been recently discussed by a number of investigators. The work of Cruickshank,<sup>4</sup> Scheunert, and Krzywanek,<sup>5</sup> Binet and Williams,<sup>6</sup> Hall and Gray,<sup>7</sup> Himwich and Barr,<sup>8</sup> and others shows unmistakably that contraction of the spleen is respon-

sible for the marked changes in red cell count observed in the conditions just mentioned. It seems not at all improbable that splenic contraction will also be found to contribute largely to the observed diurnal variations in hemoglobin values.

There are at the present time, in this country, three widely used standards from which so called normal hemoglobin values are calculated, viz. the Haldane standard, the Williamson standard, and the Haden standard. These standards all postulate or set up a hypothetical normal adult individual whose hemoglobin is arbitrarily given the value of 100 per cent. There is no hemoglobin standard for children. Haldane and Williamson set their standards from average values obtained exclusively from men. Hayden's standard value includes both adult men and women.

The Haldane<sup>9</sup> standard dates from the year 1900 and is based upon data obtained from 14 apparently normal men. The hemoglobin values in the cases studied varied from 11.9 grams of hemoglobin per 100 c.c. of blood to 15.6 grams of hemoglobin, the average value of all cases being 13.8 grams hemoglobin. In this standard an oxygen capacity of 18.5 c.c. O<sub>2</sub> (13.8 grams of hemoglobin) is assigned a hemoglobin value of 100 per cent. For 12 women, varying in age from 35 to 72 years, Haldane<sup>10</sup> in 1901 reported hemoglobin values varying from 11.2 grams hemoglobin to 13.3 grams hemoglobin with an average value 12.3 grams hemoglobin per 100 c.c. of blood. For children, both male and female, varying from 4½ to 15 years of age, he reported hemoglobin variations from 11.6 grams hemoglobin to 12.7 grams hemoglobin with an average value of 12.0 grams hemoglobin for 100 c.c. of blood. A standard for women and children has never been set up from this data, all determinations on women and children being referred to the 18.5 c.c. oxygen value obtained for men.

Williamson<sup>11</sup> in 1916 measured the hemoglobin content of over 900 men, women and children making use of a spectrophotometer in determining the hemoglobin. His average value for

males, between the ages of 16 and 60 years, is 16.92 grams hemoglobin per 100 c.c. of blood, for women between the ages of 16 and 60 years the value is 15.3 grams hemoglobin. For males, between the ages of 60 and 70, the value is 15.49 grams hemoglobin, females 15.22 grams. For children the value at birth is highest, 23.25 grams hemoglobin, and reaches its minimum at the beginning of the second year, 12.53 grams hemoglobin per 100 c.c. of blood. An average value with such extreme variations does not of course permit setting up of a standard for children. The average value obtained for males, 16.92 grams, is taken as a standard value and given a hemoglobin value of 100 per cent. Hemoglobin determinations made on women must when using this standard be referred to the standard established for men in spite of the fact that this value is more than 10 per cent higher than the experimentally observed average for women.

Haden,<sup>12</sup> in 1922, proposed a hemoglobin standard based on a combination of hemoglobin values and red cell counts. His series includes 52 apparently normal individuals. In men, between the ages of 18 to 30, he found an average of 5.08 million red cells and 15.83 grams hemoglobin per 100 c.c. of blood. Reducing the hemoglobin figure obtained to 5 million red cells the hemoglobin value becomes 15.57 grams per 100 c.c. of blood. In men, from 30 to 50 years of age, he found an average red cell count of 4,865,000 and a hemoglobin value of 15.23 grams per 100 c.c. of blood. On the basis of 5 million red cells the hemoglobin value becomes 15.65 grams per 100 c.c. of blood. In women (12 cases) he found an average cell count of 4.26 million red cells and 13.34 grams of hemoglobin per 100 c.c. of blood. On the basis of 5 million red cells the hemoglobin value becomes 15.65 grams per 100 c.c. of blood. The average hemoglobin values for all cases studied was 15.6 grams hemoglobin (20.9 c.c. O<sub>2</sub>) per 5 million red cells. This value was proposed by Haden as a standard 100 per cent hemoglobin value.

It will be seen that by referring hemoglobin values to a definite erythrocyte



count of 5 million cells Haden finds that the average hemoglobin values for both men and women coincide with the general hemoglobin average for the entire group studied, thereby eliminating a double standard. The figure proposed by Haden is therefore the most representative that we have at the present time.

The assumption, by Haden, that 5 million red cells constitute a normal erythrocyte count is, in the light of recent work open to serious doubt. Osgood<sup>13</sup> working at Portland, Oregon, reported in 1926 an average erythrocyte count of 5.39 million red cells in 137 healthy young men. For 100 normal women Osgood and Haskins<sup>14</sup> found an average erythrocyte count of 4.80 million red cells. Wintrobe and Miller<sup>15</sup> working at Tulane University, New Orleans, reported in 1929, an average erythrocyte count 5.85 million red cells in 100 healthy young men. Wintrobe<sup>16</sup> in 1930, reported average red cell counts of 4.93 million in 50 normal women. Haden's average figure for 12 women in Kansas City, Missouri, was 4.26 million red cells. Haskin's and Osgood's figures as well as those of Wintrobe and Miller represent sea level values and those of Haden an altitude well under 1,000 feet. It may be therefore that a geographical distribution exists so far as normal average erythrocyte values are concerned. More data than is at present at hand will of course have to be accumulated before this can be said to be established. Another source of error in all hemoglobin standards at the present time is the fact that diurnal variations have not been taken into consideration. This error may at times be greater than that due to the erythrocyte count.

Enough data has been presented I hope to show that we are in a terrible confusion as regards an adequate hemoglobin standard. Nor is it going to be easy to get order out of this confusion. The first step in this direction is to drop once and for all the assumption of a 100 per cent normal individual. Hemoglobin values should be recorded only in grams of hemoglobin per 100 c.c. of blood. This movement is happily on foot and making

considerable head way. If standard values are to be set up at all the very best that can be done with our present data is to set up a series of normal standards based on age and sex similar to those now in vogue in calculating basal metabolic rates. It seems very questionable whether under any conditions a standard for such a substance as hemoglobin should be based on experimentally determined average values. We measure excellence in intellectual, athletic and other pursuits by maximum performance rather than by average ability. Would it not be better for us to say that the ideal hemoglobin value should equal the value obtained in the highest five or ten per cent of a large group of healthy individuals? Polycythemia is far less prevalent and unrecognized as a pathological entity than are the mild anemias and chances are that standards obtained from apparently normal individuals on the basis of maximum performance would be far less "contaminated" by unrecognized pathological "over counts" than possible anemic "under counts." It must be clearly recognized also that so long as diurnal variations continue to complicate our arriving at a constant hemoglobin value during a single day no standard can be considered as being accurate. Until we have discovered some method of correcting for diurnal variations or establishing a set of conditions that give comparable values in different individuals at some definite hour of the day any standard that may be established in the future will continue, like present day standards, to have a potential error of from one to 30 per cent due alone to these causes.

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### Obstruction of Small Intestine Due to Neoplasm

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We are presenting this case because of a number of points of especial interest as well as the relative rarity of this type of pathology. The patient is Mrs. H., age 60 years, born in France and regarded herself as being perfectly well until approximately three weeks ago. She was admitted to St. Margaret's Hospital on August 18, 1930. During the past three years she has had some recurring attacks of what she called "stomach trouble." These attacks were characterized by more or less abdominal distress and occurred at irregular intervals. She could not prove that these attacks bore any particular relationship to what she ate. She has been more or less constipated, has had no attacks of diarrhoea and has never seen blood or mucus in the stool. Just one year prior to her entrance to the hospital, she had one of these so-called stomach attacks which was unusually severe and was accompanied by some rather severe abdominal cramps. However, this attack lasted less than one day. Since the more severe attack, the other attacks have been more frequent and each attack accompanied by nausea, but at no time did she actually vomit. The present attack began on August 12, 1930, she had severe abdominal cramps and some nausea. The following day she actually vomited for the first time. The cramps were intermittent, the point of greatest intensity she indicated to be in the region of the umbilicus. The cramps have recurred at intervals of a few moments to an hour or more and have varied in intensity, but she has experienced no period of relief longer than three hours. She has vomited on an average of twice daily. Two days before her admission to the hospital, the frequency of vomiting had increased to approximately every two hours. Nothing unusual in the character of the vomitus, rather foul odor

and no blood has been seen in it. During the six days that intervened between the onset of the present attack and her admission to the hospital she had on an average of four to six thin stools every day, no blood noticed but a considerable quantity of mucus. The morning of admission to the hospital there was discovered in the stool some blood.

The patient's husband had been ill for the past several months and three weeks prior to her admission to the hospital, he was operated upon in another hospital and died the day preceding the admission of this patient to St. Margaret's Hospital.

#### EXAMINATION

She has lost several pounds in weight during the past six months. She is the mother of five children, all living and in good health. She is 5 ft. 3 inches tall. Present weight estimated 90 lbs., and appears to be of the age stated. The skin is very dry and quite wrinkled. She is not jaundiced. Looks very much depressed, presumably because of the recent death of her husband as well as the discomfort suffered during the past six days.

Head: Negative except for the expression of distress, deep heavy rings about the eyes and a very dry tongue, showing evidence of dehydration.

Neck: Negative. No palpable enlargement of thyroid or lymph gland.

Chest: Flat, no visible deformity. Expansion poor. Heart and lungs apparently normal. Apex in 5th interspace. No murmurs heard. Pulse 96, regular and good volume. Blood pressure 182/90. Peripheral arteries definitely sclerosed.

Abdomen: Skin dry, much wrinkled and moderately distended; with distended coils of intestines visible through the abdominal wall. At times visible peristalsis. There are no palpable masses to be felt. Rectal and vaginal examination negative.

Extremities: Negative.

#### IMPRESSION

She has a very definite history of recurring attacks with abdominal cramps, present attacks beginning six days ago and vomiting beginning five days ago. Throughout the attacks some thin



watery stools with a considerable amount of mucus and on the morning of the date of admission, some blood in the stool. On abdominal examination coils of distended intestines were visible and there was evidence of a marked hyperperistalsis. It was obvious that she had a partial obstruction of the bowel, perhaps at times complete obstruction.

The patient would not consent to operation, stating that her husband had just died and that she would be glad to follow him. Repeated enemas failed to give relief. She was given normal salt solution beneath the skin during the first 24 hours in the hospital. She had 2,000 c.c. of normal salt solution and 2,000 c.c. of 2 per cent glucose. She felt considerably improved the following day but was still having cramps. The enemas had procured some gas but the coils of intestines still remained distended and she again refused operation.

On the date of admission to the hospital, the stomach analysis showed no free hydrochloric acid, total acidity 8 points and benzidine tests positive for blood. On the same day she showed positive blood in the stool. Urine was negative. Red count 4,500,000, hemoglobin 85 per cent, 13,750 leucocytes and 84 per cent polys.

Her condition remained much the same. Enemas sometimes procured gas, but at no time was the abdominal distension relieved. On the 24th of August at the same time that an enema was given, one ampule of surgical pituitrin was given. Following the pituitrin her abdominal cramps were particularly severe and the following morning, August 25, 1930, she consented to operation. The abdomen was opened under local anesthesia and almost immediately there was located a mass which involved one loop of small intestine and when delivered out of the abdomen proved to be a pedunculated tumor of the small intestine with intussusception. This was untangled and there remained a pedunculated tumor projecting into the lumen of the small intestine. This was attached to the free border and the point of attachment was quite irregular in outline. The impression was papilloma of the small in-

testine, whose base had undergone a malignant change. A coil of intestine some 12 inches in extent was left outside of the abdomen, the peritoneum being attached to the mesentery of this loop. That evening the coil of intestine was opened proximal to the tumor, thus establishing an enterostomy. Immediately there was free drainage of the intestines, the cramps ceased and the patient began to take food. On August 30, 1930, again under local anesthesia, this loop of intestine which had been rendered extraperitoneal was resected. The patient continued to improve and one week later, on September 7, the resected ends of the small intestine were freed and end to end anastomosis done and mesentery repaired. The repaired loop was dropped back into the abdomen and the abdomen closed in layers without drainage. She made an uneventful recovery. This resected loop of intestine was sent to the pathological laboratory, University of Kansas, for study. The laboratory report follows:

#### GROSS PATHOLOGY

Specimen consists of a segment of the small intestines measuring  $9\frac{1}{2}$  cm. in length and  $3\frac{1}{2}$  cm. in diameter. The edges are cut irregularly and protruding from the distal end is a polypoid somewhat roughened mass measuring 27 by 23 mm. This mass is somewhat dome shaped, is grayish-red in color and appears to be attached by a long pedicle which is adherent to the mucosa of the intestine along the free margin.

The outer surface of the intestine is covered by a roughened fairly thick layer of fibrin, gray in color. On one side is a knob-like projection corresponding to the internal attachment of the polypoid mass on the inside. This knob-like projection is irregular, firm and measures 37 by 28 mm. and projects above the surface of the rest of the intestine from 6 to 11 mm., the thickest portion being at the free margin and its summit being rough, reddened, and containing fibrin. The wall of the intestine is thickened especially in the serosa and subserosa. The mucosa is thickened, gray in color and is thrown into rather large folds.

The polypoid mass described above, on internal examination shows it to be attached by a pedicle measuring 22 mm. to its base which is at the free edge and which externally forms the knob-like structure described. The attached portion of the mass is large and firm and takes up about one-half of the lumen of the intestine. Its measurements are 27 by 32 mm. It cuts with resistance and the cut surface of the base of the polypoid mass appears gray and cellular and contains small areas of hemorrhage. Cut section of the head of the polypoid mass shows a hemorrhagic appearance and it is quite firm in consistency. The side opposite to the lumen of the intestine shows fibrin in the surface.

#### HISTOLOGICAL PATHOLOGY

The mucous membrane of the small intestine shows some desquamation of the surface epithelium with considerable mucus on the surface and presents a picture of a mild chronic catarrhal inflammatory reaction. The muscularis is thickened. In the subserosa in some places a fibrinopurulent exudate may be seen. In other places a distinct organizing inflammatory exudate can be seen. In still other fields there is a fairly sharply outlined nodule that extended in the submucosa, pushes the muscularis up to one side and is composed of interlacing bundles of what apparently are smooth muscle fibers, many of which are rather poorly formed. In some places this structure looks like a fibroma, in other places is much more like a myoma. It apparently has its origin in the muscularis mucosa. The tumor tissue is rather loose, is very vascular and shows a few diffuse hemorrhages. A hemorrhagic tendency is seen in the wall of the gut in some locations.

#### DIAGNOSIS

Myoma of the muscularis mucosa with considerable secondary inflammatory reaction and organizing fibrinopurulent peritonitis as well as a chronic catarrhal enteritis.

The peritonitis here present is undoubtedly secondary to the exposure of this loop to the outside world for a period of one week before its resection.

#### DISCUSSION

Papilloma of the stomach and small intestines is a relatively rare lesion but occurs frequent enough that it must be given consideration as a possible cause of obstruction. This woman's history of recurring attacks of partial obstruction is quite characteristic of this condition. The intussusception which this woman had as a complicating factor undoubtedly resulted from the administration of the pituitrin and it was this complete obstruction with increased severity of cramps that compelled her to finally consent to operation. We are certain that the multiple stage operations followed in this case was a life saving procedure.

Our chief object in wanting to present this case is:

1. To demonstrate a case of partial intestinal obstruction resulting from a pedunculated growth of the small bowel.
2. That these pedunculated growths may give rise to intussusception with resulting complete obstruction.
3. That these frail old people if handled with care can be successfully carried through a major surgical procedure.
4. That in the careful handling of these old people local anesthesia plays a very important part.

In concluding we want to stress the importance of the use of sodium chloride and glucose solution in the care of these patients and particularly in the preparation of these patients for any surgical procedure and to again repeat that local anesthesia is a valuable agent.

—R—

#### The Position of Surgery and Radium in the Treatment of Oral Cancer

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The general practitioner is often more concerned than any of us in the care of the individual patient suffering from cancer. To him falls the onus of early diagnosis and finally all too often the unpleasant task of managing the euthanasia.

The aspects of cancer in and about the oral cavity are somewhat protean. To properly select the best treatment at the present time for the individual patient



requires a triumvirate of knowledge—namely, of pathology, of radiology and of surgery. Surgery or radium or both are our weapons and the attack is planned when a cure seems probable or possible so as to completely encompass the anatomical and pathological necessities of the given case.

Contrary to a somewhat general skepticism epidermoid carcinomata in and about the face, mouth and jaws has a fair prognosis when a consideration of all phases of the picture are taken, and sound methods of attack used where and when they are indicated. The end results of treatment of carcinomata in this region depend upon the completeness of eradication of the local lesion and the tributary lymphatic areas. Fortunately the collar of lymphatics about the neck forms a barrier which usually prevents metastasis below the collar bone. In balancing the factors for and against a given method the same rules will not hold for the local lesion as for the embolically filled tributary lymphatics. Radium does not effect the metastatic squamous cell carcinomata in the lymph nodes as favorably as it effects the local lesion. As a matter of fact, there is no good evidence that radium has ever cured metastatic squamous cell carcinomata, at least, of the more differentiated type in the lymph nodes of the neck.

Relative to the treatment of local lesion, it should be mentioned that when bone is involved, radium does not effect a cure unless bone necrosis is produced; consequently, as a rule, excision becomes obligatory; and secondly, that by treatment with radium in the tongue and floor of the mouth group, Regaud's<sup>59</sup> large series show only about 42 per cent of the local lesions without regard to time, to have been healed. Thus, in this group, at least, the chances are less than one-half that the local lesion will be affected favorably.

It seems germane to review briefly certain fundamental conceptions which should influence in a rough way our decision. The law of Bergonie and Tribondeau<sup>2</sup> states that "immature cells and cells in an active state of division are more sensitive to irradiation than cells

that have already acquired fixed adult morphologic and physiologic characters." This was the conception for the start of irradiation therapy. Later Barlow showed that cells in an active state of division are about seven times more sensitive to irradiation than resting cells. Wood and Prime<sup>69</sup> then brought out the fact that an ordinary cancer cell requires from four to six times a "skin erythema" dose for its destruction. Just recently Martin and Quimby<sup>71</sup> have calculated the actual intensity of dosage in a large series of successfully treated cases by radium and have found that for the adult type of carcinomata, a dosage intensity ranging somewhere between seven and ten "erythema doses" is apparently necessary for the successful eradication of the disease. To give seven to ten times the "skin erythema" dose to a tumor over a period of time—a week or ten days—without causing skin necrosis, all the alpha and beta rays—practically speaking—must be filtered out and only small quantities of radium used. So that when one is going to use radium even where it is indicated it is necessary to use it correctly and thoroughly with the proper filtration for the proper length of time or else radium therapy is of no great value.

Broders,<sup>3</sup> as is quite generally known, promulgated the idea of grading the relative malignancy and of forecasting the prognosis by estimating the percentage of undifferentiated cells in a given new growth. Later, from Broders' conception Ewing<sup>23</sup> conceived the idea of classifying epidermoid carcinomata as to degrees of radiosensitivity. These ideas taken along with the clinical characteristics of the new growth in a general way (as McCarthy<sup>44</sup> has pointed out) should aid one in selecting the best treatment for the individual case. The point of the question being that in so far as treatment is concerned the tumor which is least radio-sensitive shows the highest percentage of cures by proper surgical eradication. On the other hand the tumor most susceptible to irradiation shows the least percentage of cures following surgical excision. And in certain tumors logical reasoning suggests that the indi-

vidual chances of a cure are increased by the use of both irradiation and surgery. Thus the question is never one of irradiation versus surgery but whether or not after a study of the clinical and microscopic picture, experience indicates that the choice of therapy should be surgery, radium or both.

The preceding statements might lead one to assume that the dividing line for the local lesion—at least—is clean cut. Unfortunately, it is not. As Wood<sup>74</sup> has pointed out the practical difficulties are many and there is even some experimental work which would indicate that different tumors of the same cellular morphology may vary in radiosensitivity. As yet about all the definiteness that experience justifies in so far as epidermoid carcinomata is concerned is that the basal cell tumors are sensitive and squamous cell tumors are resistant while mixed types lie in between. But in the mixed types fall the three distinctly radio-sensitive tumors which have been freshly described rather recently and should be distinguished by biopsy early so as to be selected for radiotherapy. They are the transitional cell epitheliomata (Ewing<sup>23</sup>) the lympho-epitheliomata (Regaud) and a tumor with very little tendency to keratinization, not infrequently called a reticulum-cell sarcoma (Quick and Cutler.)

In the treatment of metastatic epidermoid carcinomata not already advanced beyond the confines of the capsule of the lymph node, radium has little or no place. Representatives of three of the good radium institutes (Regaud,<sup>58</sup> Quick<sup>57</sup> and Forssel<sup>28</sup>) have no absolute record of an irradiation "cure" in squamous cell carcinomata after it has reached the lymphatic nodes of the neck. There is evidence which would indicate that in squamous cell carcinomata of the lip bloc removal of the tributary lymphatic areas will raise the percentage of "five year cures" about thirty per cent. And in intraoral carcinomata as a whole, similar evidence seems to indicate that neck dissection en bloc raises the percentage of "five year cures" about ten or twelve per cent.

The question has been discussed in

this country whether or not one should do a routine neck dissection even when the nodes are not palpably enlarged. At the Memorial Hospital, Quick<sup>57</sup> has taken the stand that it is not good surgery to do so. Ewing<sup>26</sup> and Quick<sup>57</sup> have felt that the cervical lymph nodes perform a conservative function up to a certain point but the evidence for this idea is inconclusive to say the least. Most other good clinics in this country have not come to Quick's position. Most experienced clinicians agree that it is impossible to tell clinically whether a lymph node is microscopically involved with cancer or not. To be somewhat lenient with Quick's position, it is probable that if the patient would return to a careful observer every month or two for the rest of his life and that immediately on the evidence of suspicious enlargement of the lymph nodes subject himself to proper surgery of the area, the percentage of "five year cures" would probably not be decreased perceptibly. If the ordinary individual could be depended upon to act in this manner some unnecessary surgery might be prevented but everyone knows the difficulties encountered in keeping in contact with the average patient as soon as he has no perceptible lesion. In Quick's series of 555 carcinomata of the lip 202 were lost trace of.

#### BASAL CELL CARCINOMATA OF THE SKIN

Basal cell carcinomata of the skin—the so-called "rodent ulcer"—can be cured as a rule either by total excision or by radium. The method of choice depends on the size of the lesion, its duration and the location. As it does not metastasize it is not necessary to consider the tributary lymphatic structures.

#### EPIDERMOID CARCINOMATA OF THE SKIN

In the epidermoid carcinomata of the lip, radium causes the local lesion to heal in most of the cases. But surgical excision followed by simple plastic surgery shows as good or better results with no more resulting deformity than that caused by radium. Surgical treatment allows a microscopic examination of the lesion, which we feel is important in the proper study of a given case. Small early relatively differentiated



cancer of the lip possibly does not need an excision of the related lymph nodes. In all other cases of lip cancer, a neck dissection including the submental and submaxillary triangles is indicated except the inoperable fixed carcinomata which are best treated palliatively by radium.

The surgical results may be fairly accurately represented by those given by Brewer,<sup>15</sup> who united the cases of several of the best American clinics. Those cases without involvement of the lymph nodes in which the lymph nodes were removed showed 92 per cent remaining well for 5 years or more. In the same group if the lymph nodes were not removed the 5 year cures fall to a percentage of 62 per cent. When the lymphatic nodes were already involved 34 per cent remained well for 5 years or more.

The statistics that can be presented for radium might be fairly well represented by those of Regaud<sup>59</sup> which were reviewed December 31, 1927, and are tabulated so that they can be reduced to five year cures. Thirty per cent of his cases were classed as operable and 24 per cent as questionably inoperable. Twenty-eight per cent are living five years or more after treatment. Another point of interest in Regaud's cases is the percentage of clinical disappearance of primary lesions treated, which were in the inoperable cases 17.8 per cent, in the questionable operable 91 per cent and in the operable cases 98 per cent.

#### EPIDERMOID CARCINOMATA OF THE CHEEK

When epidermoid carcinomata of the cheek is anaplastic and nondifferentiated microscopically and highly malignant clinically, radium may be the best treatment for the local lesion but in the less anaplastic more differentiated types, surgery should be considered the method of choice. An unilateral dissection of the neck *en bloc* should be done when a cure is attempted. Simmons<sup>64</sup> in 13 cases treated by surgery reports 52 per cent cures for four years. On the other hand, Brewer<sup>15</sup> quotes 15 cases treated by radium show 35 per cent cures for three years. Quick's cases (185) show a con-

siderably lower three year cure period (11.4 per cent.)

#### CARCINOMATA OF THE PARANASAL SINUSES

After radical surgical resection alone it is somewhat unusual to have a case of carcinomata of the paranasal sinuses live as long as one year. Thus, it is rather generally agreed that the best treatment is offered when free exposure and free drainage is given by surgery (Regaud<sup>59</sup> even resects the superior maxillae) and radium is depended upon to effect the actual cure. A soldering iron is inserted into the antrum from below—sometimes through the lateral part of the palate and alveolar ridge—and under low grade heat the antral cavity hollowed out. A neck dissection should be done in the more differentiated squamous cell lesions on the side of the lesion but it would seem hardly worthwhile in the very anaplastic or the more radiosensitive lesions. External radiation to the neck would seem preferable.

#### CARCINOMATA OF THE PHARYNX

A high percentage of the carcinomata of the pharynx are of the transitional cell variety and are often of grades III and IV (Broders), which theoretically should mean that a considerable percentage should be radiosensitive and that the cures with radium should be encouragingly common but statistics show that the hoped-for results have not been obtained as yet. When moderately early carcinomata of moderate grade malignancy are found in the pharynx, surgical treatment can be instituted with some hope of success, the method of choice is excision of the local growth with diathermy or cautery and dissection of the glands of the neck. Advanced or recurring carcinomata or moderately advanced carcinomata of undifferentiated microscopic appearance and clinically of the more malignant type and which show a morphological picture suggestive of considerable radiosensitivity are probably cases for radium alone and neck dissection is often useless. Every tumor presents its individual problem because of location, grade and malignancy and extent of metastasis and surgery by cautery or diathermy and radium or a combination of the two may

all come into play for the best possible result.

In Quick's<sup>54</sup> 51 followed cases of carcinomata of the pharynx treated by radium, reported at the end of 1928, 5 or about 10 per cent are free from disease clinically and 3 of the 5 have been treated less than 3 years. Neoplasms of the tonsil show a somewhat better record with radium than carcinomata of the pharynx but unfortunately biopsy is often not considered advisable in this region. About 10 per cent of Quick's 242 cases are well over 3 years. On the other hand, New's<sup>45</sup> statistics of nasopharyngeal and pharynx neoplasms including the tonsil in which a combination of surgery and radium was used in 45 cases show 29.7 per cent living on an average of about 28 months at the time of his report (1926.)

#### EPIDERMIOID CARCINOMATA OF THE TONGUE AND NEIGHBORING MUCOSA

In cancer of the tongue and neighboring mucosa, especially if the lesion be in the forward two-thirds, wide excision of the local growth with a cautery knife or by electro-coagulation methods can be fairly advocated as most likely to effect a cure. It might be best to except from the foregoing group those cases in which the clinical picture is of rapid growth and microscopic examination shows the growth to be rather anaplastic and undifferentiated, and to consider radium application as preferable when good radium facilities are available. When striving for a complete cure in cancer of the tongue and neighboring mucosa dissection of the neck on one or both sides as indicated is to be advocated.

Butlin<sup>12</sup> many years ago presented surgical statistics which are still of interest. In 197 tongue cases he had twenty operative deaths (10 per cent) but 31 per cent of the cases lived over three years. Of 44 cases on which gland dissections were not performed 29 per cent showed cures and of 57 cases which had gland dissection 42 per cent showed cures. His cases were moderately advanced and speak for gland resection.

Although some increase in cures of advanced cases has been made by some such men as Blair<sup>4</sup> by unusually radical

surgical methods, the mortality and mutilation is correspondingly increased.

One can state that the statistics of Butlin,<sup>12</sup> Bloodgood,<sup>14</sup> Judd,<sup>36</sup> New<sup>36</sup> and Blair<sup>4</sup> indicate that surgery alone when properly done in cancer of the tongue and floor of the mouth offers about 60 per cent chance of cure in the early cases and from 30 to 40 in the moderately advanced cases and 20 to 25 per cent chance of a cure in the advanced cases, when operated on by very radical methods. The operative mortality could probably be placed at 20 per cent in the advanced cases radically operated by the methods advocated by Blair.<sup>4</sup> From this high point the operative mortality should fall to practically no deaths in the early lesions.

On the other hand, radium statistics may be represented by those of Regaud<sup>59</sup> Paris. His statistics for cancer of the tongue and floor of the mouth, which includes all cases seen, are revised to December 31, 1927. When reduced to 5 years or longer cures, show 121 cases with 17.3 per cent (21) clinical cures. His three year cures figured on the same basis show 230 cases with 18.2 per cent (42) clinical cures. The primary localization was arrested for the time being in 43.8 per cent of the cases or less than one-half of the cases. Forssell<sup>28</sup> (Stockholm) presents 160 cases of mouth cancer, 72 of which had lymph node involvement. In none of the 72 cases was there a single one year cure for radiation alone. By surgery of the glands combined with radiation he obtained 35 per cent three year cures and 30 per cent five year cures (10 out of 27 cases.)

#### CONCLUSION

In conclusion it seems logical to suggest that the best methods of treatment for the individual case should occur when the cellular characteristics, the probable irradiation response and the chances for cure by excision methods are all considered. In certain cases excision methods used along with radium increase the chances of a cure. It must be remembered that after all if the treatment—whatever the type—is not planned on a scope sufficient to get be-



yond the farthest extension of the disease or in other words does not meet the pathological necessities of the case, no hope for an ultimate cure logically can be entertained. He who presumes to treat cancer should have a well balanced combination of pathological, radiological, and surgical knowledge and should be in a position to use all three.

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R

### Tribromethyl Alcohol (Avertin) As a Rectal Anesthetic

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The presence of pain, fear and excitement have been the body companions of surgery since the advent of surgery to science, but not until the days of Morton and Crawford were those undesirable features divorced from operative surgery, and then not in their entirety, but to such an extent that pain was relieved.

From the days of these two pioneers to the present day many methods of alleviating pain and producing anes-

thetia at operation have been devised and elaborated upon. Roux and Pirogoff in 1846 and 1847 respectively were the first to attempt rectal anesthesia with an aqueous solution of ether and the rectal administration of ether vapor. Following this the advent of local anesthesia caused a wave of enthusiasm, but the frequent incomplete anesthesia obtained by local anesthesia caused a loss of interest in such methods. Gawthmey<sup>1</sup> in 1913 next attempted to produce anesthesia by the rectal injection of an ether and oil solution which has not been very popular due to the uncertain rate of absorption of ether in the oil mixture and the relative short duration of the anesthetic. Therefore, we have apparently been without a desirable rectal anesthetic until 1923 when Willstatter and Duisberg<sup>2</sup> first prepared tribromomethyl alcohol, but it was Eichholtz<sup>3</sup> in 1927, who advocated its use as a rectal anesthetic. Since then over 300,000 cases of tribromomethyl alcohol anesthesia have been reported in European literature and quite a few in American literature. From the excellent report on these records and our own experience, it seems that this new anesthetic is most adaptable to surgical procedure as a basic anesthetic.

Tribromomethyl alcohol has at its command many valuable and agreeable attributes. Chief among which is the ease in which we may produce not only a state of unconsciousness but anesthesia. We are able to produce unconsciousness with no fright on the part of the patient, while he is totally unaware of his future state. What could be more pleasing or acceptable in pediatric surgery or surgery in those individuals who are highly excitable or nervous or that individual who dreads the ordeal of an operation by past experiences.

The individual variations as to susceptibility are present with the use of tribromomethyl alcohol as in other anesthetics. The degree of anesthesia obtained with it determines the required amount of ether, gas or local infiltration which may be added safely to a desired degree of anesthesia. The combination of tribromomethyl alcohol with inhalation anes-

thetia seems to produce a state unattainable with a single general anesthetic and approaches Lundy's principle of a balanced anesthesia.

#### DESCRIPTION

Tribromomethyl alcohol or avertin is a white crystalline substance with a melting point of 80° C. easily soluble in water at 40° C. The product for anesthetic purposes is marketed as a clear solution of which 1 c.c. contains 1 gram of the substance, dissolved in amylene hydrate (tertiary amylalcohol). When heated above 45° C. the molecule breaks down with the formation of dibromacetaldehyde and bromic acid. The dibromacetaldehyde is a highly toxic irritant to the intestinal mucosa.

#### PREPARATION AND ADMINISTRATION

The preparation of your patient is similar to that for any surgical procedure except that the lower bowel should be entirely emptied by the use of an enema the night before operation, and a small enema on the morning of operation. As to the pre-operative administration of drugs, I think it unnecessary to give any. Some users advocate the use of small doses of morphine, while the reports from European clinics show that the vast majority use veronal or a similar drug as preoperative medication. In our series all methods were used and the best results were obtained by the non use of morphine preoperatively.

The drug is best administered in the patient's room where the surroundings can be made quiet and dark which are conducive to sleep. The required amount of avertin is measured and mixed with distilled water (at 35° to 40° C.) a sufficient quantity to make a 3 per cent solution. This solution is thoroughly stirred, and then tested with a few drops of congo red to determine the presence of dibromacetaldehyde. If the solution remains pink after adding the congo red, it is desirable to use, but should it turn purple the molecules have broken down and the solution should be discarded. This test is obligatory before the solution is ever placed into the rectum. One-half hour before operation the solution is introduced into the rectum by means of a small rectal tube or an ordinary



catheter; this being performed very slowly. When completed the tube is clamped off and left in the rectum for a few minutes. Avertin in very small doses acts as an antipyretic, in large doses as a hypnotic, in still larger doses as a narcotic, and lastly as an anesthetic. The therapeutic latitudes of avertin, as stated by the work of Lendle,<sup>4</sup> comes in the sphere of related substances, accordingly this substance takes an exceptional position through its rapid absorbability and simultaneously increased effectiveness. The result of the anesthetic is sometimes dependent upon the blood concentration and the specific coefficient of distribution throughout the body. Only those bodies can be used for rectal methods which are not only quickly absorbed, but which can be easily and completely destroyed by the body. In reality, it has been shown by the work of Parsons, Killian and Schneider<sup>5, 6</sup> that avertin presents these requirements more satisfactorily than any other compound.

The dosage of avertin has been a question of much dispute both among foreign and domestic users, varying from 60 to 130 milligrams per kilogram of body weight. In our series, the dosage ranged from 90 to 110 milligrams per kilogram of body weight (exclusive of obstetrical cases in which 60 milligrams per kilogram of body weight was used.) I do not think we should confine ourselves to the use of body weight as an index to the dose to be used. We arrived at the above figure by taking 100 milligrams per kilogram of body weight as an average in standard and increased or decreased the dose according to the condition of the patient, age and sex bearing an important influence. It has been found that children and young adults require a relatively larger dose than older individuals who are debilitated or those affected with faulty elimination. As to sex, we always used a slightly larger dose for men than for women, never exceeding 10 c.c. for one dose.

#### ACTION

Once avertin is placed into the rectum the absorption is rather rapid; in 3 to 5 minutes the patient acquires a state of deep slumber and is easily transferred

to the operating room. Straub<sup>7</sup> reports that 80 per cent is absorbed in the first 20 minutes and 95 per cent absorbed within the first two hours of the anesthetic, and during the anesthesia Sebening<sup>8</sup> has found it in the blood in a concentration of 6 to 9 milligrams per cent.

The action of avertin on the cardiovascular system shows a slight variation from normal. The pulse volume is good, rate slightly above normal, rarely above 100. There is usually a slight drop in systolic blood pressure, the diastolic remaining constant. The systolic may fall as much as 15 mm. of mercury but soon returns to normal. Unger and May<sup>9</sup> have reported a number of cases in which they used an electrocardiograph and were unable to find any change attributable to the anesthetic. Parsons<sup>5</sup> in his experimental work shows that avertin resembles chloroform in its action upon the heart, but only one-sixteenth as toxic. Therefore, avertin has a relatively low toxicity upon the cardiovascular system.

Common to many anesthetics the respiratory rate is slowed, but is increased in depth. Straub<sup>10</sup> has found experimentally that the respiratory efficiency is maintained by an increase in the depth of breathing. In the body avertin is detoxicated in the liver with the formation of urobromalic acid, a product formed in combination with glycuronic acid. Straub has been able to recover 81 per cent of the drug in the combination from the urine within 48 hours, and Parsons recovered 72 per cent in the same period of time. He also recovered slight traces of bromine in sweat but none from the expired air or feces. According to Parsons' experimental work there are four ways in which it is possible for avertin to be excreted: (1) as sodium bromide, (2) as unchanged avertin, (3) as urobromalic acid, and (4) as an organic compound of bromide other than unchanged avertin or urobromalic acid. White and Kreiselman<sup>11</sup> in a series of analyzed cases report the comparative changes after operation as follows: a slight increase in white blood cells, blood sugar, non-protein nitrogen, pulse rate, respiration rate and systolic blood pressure; a

slight decrease in red blood cells, hemoglobin, chlorides, carbon dioxide and diastolic blood pressure.

#### POSTOPERATIVE STAGE

In any surgical procedure the post-operative condition of a patient is of great concern to the operator. Patients who have taken an average dose of avertin usually remain in a state of analgesia and amnesia from one to three hours after returning to their rooms. During this time the corneal reflexes are active, the sleep is light, but deep enough to alleviate pain and discomfort. On leaving the operating room the patient as a rule is dry and warm with an unusually pink color, and continuing throughout the postoperative stage, toward the end of which the patient may complain of pain, thirst or hunger, and upon relief he resumes his sleep, which may last several hours. Postoperative distention is remarkably decreased, also abdominal pain which is much less than that following general anesthesia. The patient should be watched continuously by an attendant. The masseter muscles are relaxed, the tongue and jaws drop and the pharyngeal reflexes are diminished. The failure to keep an open airway at all times may result in asphyxia. As a precaution to such difficulties from mechanical obstruction an airway should be inserted as soon as the pharyngeal reflexes are abolished, leaving it in place during operation and during the postoperative stage.

In our series, we have not observed a single case of rectal irritation or mucous discharge from the bowel, post-operative vomiting, no respiratory complications such as bronchitis or pneumonia were seen. In other words, in our series of over 200 cases no ill effects attributed to the anesthetic have been observed.

#### ADVANTAGES AND DISADVANTAGES

The advantages of avertin are manifold: 1. Prolonged sleep following operation, making it unnecessary to use morphine for the relief of postoperative pain. 2. Complete absence of mental distress or stage of excitement, preoperatively or postoperatively. 3. Decreased nausea and vomiting. 4. Relative infrequency of postoperative respiratory

complication. 5. Rapid elimination with no direct injury to the organs involved. 6. Convenient for operation about the head and neck and in all phases of plastic surgery. 7. Especially adapted for thoracic surgery. 8. Of special value in prolonged operation as neural surgery and prolonged abdominal operations. Avertin has been found to be of special value in controlling convulsions in tetanus. In such a condition we have the absence of operation trauma. Therefore, the patient's condition warrants a larger dose. I have seen excellent results obtained in one instance, the convulsion disappearing promptly, but as to the curative phase on the course of the disease, it is uncertain. Lawen<sup>12</sup> reports one case in which he gave twenty anesthetics, one after another without injury to the patient, thereby showing the non-accumulative affect after repeated doses. The disadvantages are few and can be obviated by a careful administration of the drug, by not overheating the solution, guarding against rectal irritation, and I think care should be taken to maintain an attitude of conservatism relative to dosage by not attempting to use avertin as a general anesthetic, but as a basal anesthetic. The contraindications are few and may be enumerated as follows: 1. Advanced diseases of the kidney or liver; 2. acidosis; 3. extreme cachexia; 4. ulcerative diseases of the rectum.

#### CONCLUSIONS

Our series consisted of the following operations: herniotomies, appendectomies, cholecystectomies, pelvic operations, thora-coplasties, phrenic avulsion, brain tumors and radical antrum operation, plastic surgery and obstetrics.

In all cases we were very conservative regarding the dose and in no case did we attempt to get complete anesthesia with avertin alone, but in two thyroidectomies and two thoracoplasties the operation was completed without the addition of local infiltration or an inhalation anesthetic. In all four of these cases 100 milligrams per kilogram of body weight was given. Very few authors have reported deaths from avertin, but there are some, and a conservative estimate



from the literature would place the rate at 3 in 10,000.<sup>13</sup> Killian<sup>14</sup> reports several deaths after avertin anesthetic, but had not proof that the anesthetic caused death in all cases, due to the fact that a postmortem was not done on all cases. The majority of these deaths reported occurred in the years 1927, 1928 and 1929 when doses were used, attempting to use avertin as a general anesthetic, not appreciating it as a basal anesthetic.

This work was done at the Johnston-Willis Hospital, Richmond, Virginia, on the service of Dr. F. S. Johns, and at St. Margaret's Hospital on the service of Dr. C. C. Nesselrode.

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#### TUBERCULOSIS ABSTRACTS

The greater precision of the *x-ray* film, its permanence, and the convenience of studying it at leisure are advantages over the fluoroscopic method. But the fluoroscope is of great value under certain special conditions. Its advantages are chiefly economy of time and money for the examination of large groups of apparently well adults. Some clinicians maintain that with the fluoroscope it is possible to discover the lesions as accurately as, and more quickly than by means of percussion and auscultation. None would deny that a physical and *x-ray* examination is the most accurate. But a physical and fluoroscopic examination is better than a physical alone. Certainly the fluoroscopic method deserves study by those who are interested in finding tuberculosis in groups

of college students, employes and soldiers.

#### THE FLUOROSCOPE IN THE DIAGNOSIS OF TUBERCULOSIS

Reid in 1929 reported on the results of examining applicants for positions in a large insurance company with the fluoroscope. This examination was used at first as an adjunct to the routine physical examination of the chest. The accuracy of the method was tested on 100 persons whose chests were negative on physical examination and were passed fluoroscopically as normal. These were *x-rayed* and the entire group was classified as with "healthy adult chests" by the roentgenologist. Another group of 123 cases in which definite signs were described by the same physician, such as harsh breath sounds, transient rales, and prolonged expiration at the apices, were fluoroscoped, classified, and then *x-rayed*. In only one of these did the *x-ray* show evidences of tuberculosis and this at a very early stage. Reid concluded that "in the absence of physical signs, it is possible to demonstrate pulmonary pathological changes by means of the fluoroscope with sufficient accuracy to render the procedure a most valuable adjunct to the routine physical examination of young adults."—*The Value of the Fluoroscope as an Adjunct to Routine Physical Examination of the Chest*, Ada Chree Reid, *Amer. Rev. of Tuberc.*, July 1929.

#### FLUOROSCOPE EXAMINATIONS OF UNIVERSITY

##### STUDENTS

Kattentidt reports the findings among students of the University of Munich. In the winter of 1929-30, he made fluoroscopic examinations of 1,768 students (1,363 males and 405 females) as part of the compulsory physical examinations at matriculation. Some evidence of tuberculosis was found in 14.5 per cent. In most cases, the tuberculous lesion was inactive, a few were partially active, but in six cases, or 0.34 per cent of the entire series, there was an open lesion. These six cases all occurred in males. At the same time, 772 students (699 males and 73 females) were examined at their own request. The findings were substantially the same as among the "compulsory"

group. In the previous summer semester (1929), the percentage of tuberculous lesions found in 1,437 male students was 22.6 per cent and 0.49 per cent open lesions, and of 360 female students 15 per cent tuberculous lesions and 0.28 per cent open lesions.

Combining the findings for the two semesters of compulsory and voluntary examinations of 4,836 students of both sexes, the results were as follows

Inactive lesions .....	14.8 %
Partially active lesions ....	1.3 %
Active closed lesions .....	0.17 %
Open lesions .....	0.39 %

Total tuberculous lesions found .....	16.66 %
---------------------------------------	---------

The author cites the findings of Kayser-Petersen and Wiewiorowski, who examined male university students. Adding this series to his own, he finds that in the combined groups of 6,513 apparently healthy young men between 20 and 30 years of age, 30 cases or 0.46 per cent had open tuberculosis. This figure, he believes, represents the incidence of tuberculosis among this group at a certain definite time.

#### DEVELOPMENT OF ACTIVITY DURING SEMESTER

Further cases of active tuberculosis may develop in the group, as shown in repeated examinations. Thus, of 2,296 students examined in the summer semester of 1929, four more students (male) developed open tuberculosis and one an active closed tuberculosis up to June 25, 1930. Of the students examined in the winter semester of 1929-30, one additional case of active closed tuberculosis developed. Thus, in the course of a year, the incidence of open tuberculosis increased from 0.48 per cent to 0.65 per cent.

Brief clinical histories are given in the eleven cases (eight with open and three with closed lesions) discovered in the winter semester. The lesion was usually of the chronic interstitial type; the sputum was positive for tubercle bacilli in seven cases, negative in three cases and no sputum was obtainable in one case. Physical examination showed no evidence of tuberculosis in seven of

these eleven cases. This would indicate that physical examination alone fails to reveal tuberculosis in a larger percentage of cases than has been suspected. In these eleven cases, eight had open lesions as shown by the positive bacteriological findings in seven cases and the clinical findings in one case. Yet none of these showed large areas of destruction; the author has often been surprised to find tubercle bacilli in the sputum in cases in which there was little evidence of a destructive process.

#### SUPERVISION OF CASES NECESSARY

Continuous supervision of such cases is necessary, however, as shown by the case of one student, who showed hilus changes on her first examination, and no definite changes on re-examination half a year later (no lesions in the pulmonary tissue). Yet ten days after this second examination, this student had a pulmonary hemorrhage, which was thought to be due to bronchiectasis, as the sputum was negative and the red cell sedimentation velocity was normal. As a matter of precaution, she was sent to a sanatorium for observation and there pulmonary focal lesions developed suddenly with positive sputum; the tubercle bacilli persisted in the sputum for several months. This was the only case in which signs of activity developed in cases with inactive lesions within six months. But this is not remarkable, since tuberculosis is a decidedly chronic disease; it indicates that these cases must be kept under prolonged supervision.

Among 44 cases diagnosed as partially active in the summer semester (1929) two students developed symptoms that necessitate sanatorium treatment. In one of these cases, there was an increase in the pulmonary lesion, and the sputum showed a few tubercle bacilli. In the second case, the pulmonary lesions showed little change, but new adhesions had developed, and the patient's general condition was poor.

#### TYPES OF LESIONS

A study of the types of tuberculous lesions found at the different ages in the 2,540 students examined in the winter semester showed 457 students under



twenty years of age (17 to 19), the great majority over twenty years of age (from 20 to 30 years). The early forms of tuberculous lesions, including exudative pleurisy, occurred only at the earlier ages, mostly at twenty years or younger. Most of the cases of open tuberculosis occurred at twenty-one years of age or later, only two cases at the age of twenty, and none before the age of twenty. The highest percentage of cases of open tuberculosis occurred at the age of twenty-one (in 0.78 per cent of students at this age.) The focus of infection was demonstrable only in six of the nineteen active cases of tuberculosis.

#### HEALTH CARE OF STUDENTS

The records of the results of the physical examination and of the fluoroscopic examination are filed with the university. The student is also given a printed card showing the result of the fluoroscopic examination, and whether there is any indication of tuberculous lesion in the lung, whether such lesions are entirely inactive or show any signs of activity, and whether any type of athletics is permissible. This brings the patient into contact with the athletic medical director, where this is advisable, and indicates whether further supervision or examination is desirable, or whether immediate treatment is necessary. The author is of the opinion that certain types of sports and gymnastic exercise are of definite value in the treatment of inactive tuberculosis; and that the close co-operation established with the athletic medical director by the system adopted is of definite value for the students, and for the further study of the effect of athletics on respiration and circulation in relation to the effects on tuberculosis.—*Fluoroscopic Examination in the Second Semester at the University of Munich, B. Kattentidt, Ztschi. f. Tub., 58:209, 1930 (October.)*

#### MEDICAL SCHOOL NOTES

Dr. Albert S. Welch read a paper and gave a motion picture demonstration before the Terre Haute, Indiana, Academy of Medicine on "Ectopic Heart" recently.

Dr. Caryl Ferris read a paper on

"Diabetes" before the Jasper County Medical Society, Joplin, Missouri, recently.

Dr. O. T. Blanke, '24, Joplin, Missouri, and Dr. Adolph Boese, '24, Coffeyville, Kansas, attended the recent meeting of the American Association for Goitre, which was held in Kansas City.

Dr. and Mrs. James Danglade, '26, are the proud parents of a baby boy, born April 7, 1931.

Dr. P. T. Bohan recently attended the meeting of the American College of Physicians which was held in Baltimore, Maryland.

Dr. F. C. Helwig talked before the Clay County Medical Society, Clay Center, Kansas, in March on "Coronary Disease."

Dr. H. M. Gilkey read a paper before the Butler County Medical Society at El Dorado, Kansas, on "Treatment of Nutritional Diseases of Children."

Robert Murray Isenberger, Jr., born February 17, 1931, is the son of Dr. and Mrs. Robert M. Isenberger.

Dr. Thomas G. Orr read a paper before the Wyandotte County Medical Society, Kansas City, Kansas, on March 3rd on "Water and Salt Balance."

#### RELAXATIVES

A Boston physician says that in fifty years kissing will be a thing of the past and, in fifty years, we for one, won't care.—New York Evening Post.

✦ ✦ ✦

The mosquito, unlike a doctor, presents his bill before he works on you.—Florida Times-Union.

✦ ✦ ✦

They had to give my aunt Tillie ether twice for one operation. The first time was for the operation, and the second was to stop her from talking about it.—Judge.

✦ ✦ ✦

The nose, a physician says, is a feature which never changes. Unless, of course, it's poked once too often into other people's business.—Life.

✦ ✦ ✦

The truth-in-advertising movement has made gigantic strides. A society bootlegger in Philadelphia made his deliveries in packages labeled "Floor Paint."—Detroit News.

# THE JOURNAL

of the

## Kansas Medical Society

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For some years it has been a custom to make the May number of the Journal the "Medical School Number." This year practically all of the space is being utilized by the members of the faculty. They are giving us a splendid series of papers and there is no question but this sort of cooperation will be highly appreciated by the members of the Society.

### THE CRIPPLED CHILDREN'S LAW OF KANSAS

The last legislature enacted a law for the care of the indigent crippled children of the state which should appeal to every physician in the state. It affords the medical profession an unusual opportunity, and the responsibility for its success will depend largely on the kind of support given it by the rank and file of the physicians of the state. The average doctor may be uninterested in it or may regard it solely as a means of furthering his own practice and thus rapidly bring the law into disrepute, or he may, and undoubtedly will, submerge all self interest and pave the way for providing every physically handicapped indigent child every chance to become an inde-

pendent, self-respecting member of society.

The provisions of the law are unusually thorough and seem to provide for every contingency that may arise in this problem. It has a remarkably broad interpretation of the meaning of the crippled child, embracing all persons under twenty-one who have a physical defect or disease that can be improved or removed by appropriate medical or surgical treatment. It provides the finances to defray the expense of such treatment, each county being assessed one-tenth mill for every taxable dollar to comprise a separate fund to be used only for the care of crippled children of that county. It includes compensation to the doctor as well as to the hospital. It provides for a commissioner to carry out the provisions of the law and to see that the afflicted child gets into the hands of none but competent specialists and in only those institutions that have fully adequate facilities to give the best service. It also provides safeguards so that only deserving indigent children may reap the benefits of this law. Furthermore, it opens the way for the care of such patients in various sections of the state as soon as adequate facilities and competent personnel become available.

While the law has supplied the governmental machinery for the care of the crippled child, every physician knows that much has to be done before its full benefits can be secured. It is estimated that over 5,000 children will become eligible for this treatment. Yet there is no well organized children's hospital in the entire state that can provide the variety of services such as can be secured in some of our neighboring states. There is at the hospital of the state medical school a children's ward with a maximum capacity of fifty patients and a similar ward in only one other hospital



in the state. There should be a well equipped, specially designed children's hospital with at least three times as many beds, including a brace shop, a complete physiotherapy unit, a department of occupational therapy and a special school for the education of patients who may be kept months from school. Only with such supplementary departments and equipment can the hospital be thoroughly efficient, but this is necessarily expensive and can be erected and managed most economically where an organization of well qualified specialists already exists, such as in the medical schools of the state universities. The states of Oklahoma, Minnesota, Wisconsin, Iowa and Indiana have provided such children's units at their respective medical schools and the medical profession should urge that Kansas do the same with its medical school. Failure of the law may result from inadequate facilities rather than from the law itself or the attitude of the doctors, and all physicians should be informed of this situation and use their influence to change this lack of preparedness.

The medical profession should not only be awake to the opportunities of this law but should be cognizant of the danger to this law if a few improperly qualified physicians should succeed in using the law to further their own private interests or if the cultists should succeed in their endeavors to be permitted to carry on their unrecognized practices on children under the protection of this law. In other words, two obligations rest upon every physician interested in his community and in the crippled children of the state, first, to give unstinting support to the crippled children's commission in limiting the care of their wards to only those organizations that are adequately equipped and have competent specialists on their

staffs and, second, to use every influence to secure more adequate and larger facilities for such care, either at the state medical school or at some other large center or at several places.

H. R. WAHL.

## —R— SOCIETIES

The Miami County Medical Society met in regular session at the Paola Country Club Tuesday evening, April 14, having as their guests the members of the Franklin County Society. Some of the Ottawa boys reported early and played a round of golf, after which dinner was served at the club to about forty members and guests.

The program was opened by Dr. C. E. Virden of Kansas City, Mo., who went into detail on cholecystography, showing some extremely interesting plates covering minutely the differential diagnoses of diseases of the gall bladder.

Dr. Eugene Hamilton also of Kansas City, Mo., followed with a highly interesting survey of surgical diseases of the gall bladder and neighboring anatomy, demonstrating some specimens of rare pathological interest. The high point in the doctor's talk was the attention to the differential diagnoses and the careful estimate of the vital resistance of patients before surgical intervention.

General discussion of the problems confronting the general practitioner followed before adjournment.

P. A. PETTIT, Secretary.

### FORD COUNTY MEDICAL SOCIETY

The March meeting was held in The Protestant Christian Hospital at which time a luncheon was served to the members and visitors, by the management of the hospital.

The principal speaker was Dr. Paul F. Stookey, of Kansas City, Mo., who gave a helpful talk on "Smallpox."

Visitors present were: Paul F. Stookey, Kansas City, Mo.; C. B. Francisco, Kansas City, Mo.; Wm. F. Fee, Meade, Kansas; M. C. Jenkins, Pratt, Kansas; L. G. Blackmer, Liberal, Kansas; Fred L. Holcomb, Coldwater, Kansas; R. A. J. Shelley, Coldwater, Kansas; G. Kenneth Lewis, Garden City, Kansas.

A committee on medical care of indigent persons in Ford and Gray counties reported contracts by which Ford County pays \$2,200.00 yearly and Gray County pays \$200.00 and the work in the two counties is done by the members of the society.

The neighboring physicians were asked to attend the April meeting and hear Dr. Evan S. Connell of Kansas City, Mo. Dr. Connell gave an illustrated talk on "The nasal sinuses as a factor in systemic disease." Some very interesting cases were reported, and a new slant on these sinuses was presented.

Visitors present were: Evan S. Connell, Kansas City, Mo.; R. M. Troup, Garden City, Kan.; H. H. Miner, Ulysses, Kan.; F. E. Dargatz, Kinsley, Kan.

W. F. PINE, Secretary.

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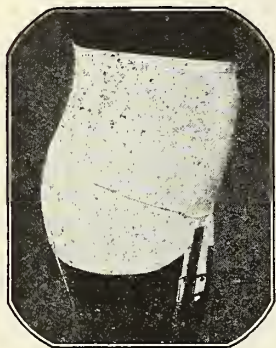


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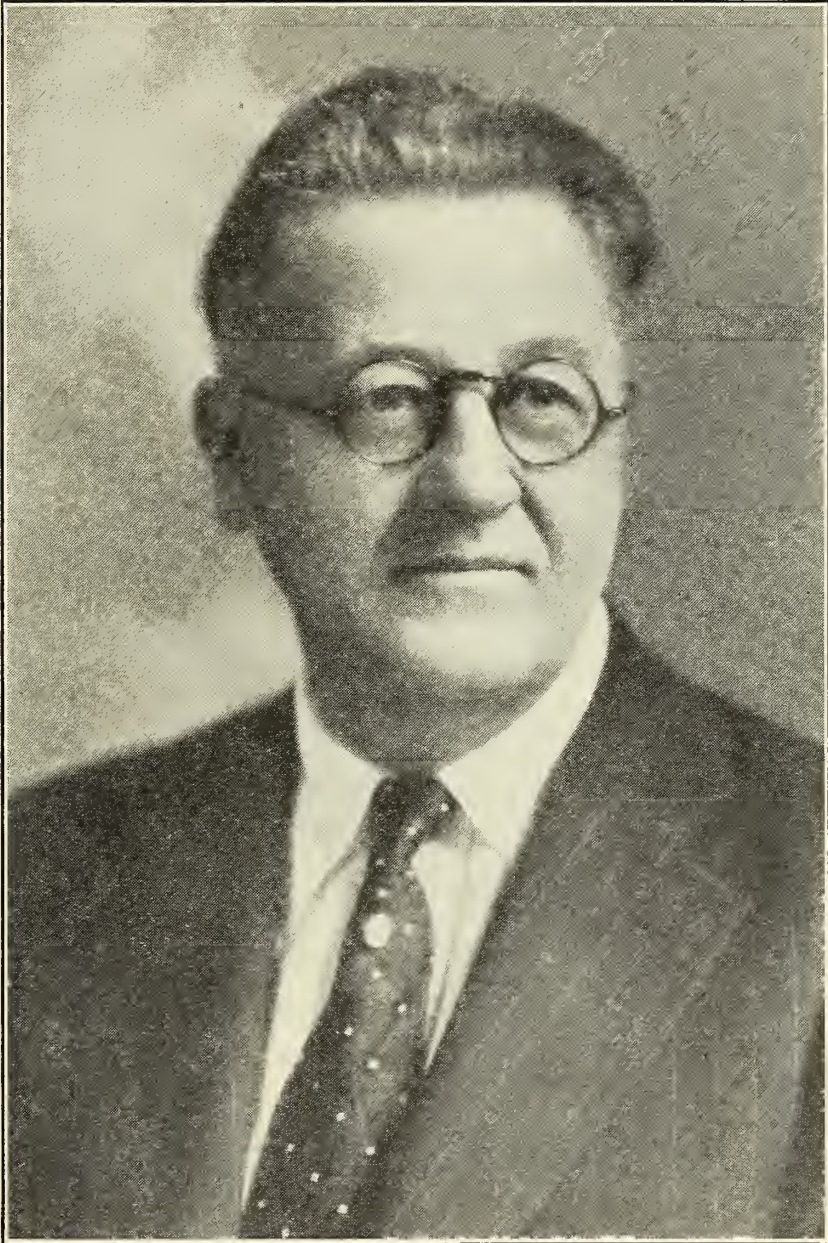
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of the

## Kansas Medical Society

VOL. XXXII

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No. 6

### What of the Future of Organized Medicine?

President's Message

EDGAR C. DUNCAN, M.D., Fredonia

It is with a feeling of inadequacy that I submit this annual message, made obligatory upon the President. You have honored me with the highest office within the gift of the Society, which I appreciate beyond the power of words to express.

Organized medicine finds itself today in a position unlike any heretofore experienced. I would like it understood that nothing I say is intended in a spirit of criticism of any individual. My predecessors have given you service of the highest quality and I cannot allow this occasion to pass without a word of appreciation of Dr. L. F. Barney, our President in 1929, and Dr. E. S. Edgerton, President in 1930, who both devoted much time to the interests of the Society; also Dr. J. F. Hassig, our Secretary.

I want to tell you in a perfectly candid manner some of the things I think should be corrected; I am not a reformer but it is high time we change from a meek, defensive attitude and take the offensive for our own and the people's good.

Medical practice has, as you know, undergone as marked a change in the last twenty years as has every branch of the world's business, notably, transportation. A great change has come about in the profession itself. For quite a while it was thought good business by certain groups to deprecate the ability and importance of the general practitioner, but a change has come about, and I believe it is realized that the regular general practitioner is here because he is essential for the common good, although many contributors to our lay magazines

and daily press seek to create a contrary opinion.

I want to speak for a few minutes about "Medicine by Foundations." A writer in a nationally read magazine has the following to say in writing of the Duke Foundation which seems to have a strange hold on North and South Carolina. "A physician friend of mine, whom I see on occasional visits to one of the larger southern cities, shakes his head mournfully over the power of the Duke Foundation—insidious, sinister, dangerous—these are three of the epithets he used in our most recent discussion of the subject; there were others of similar import but I cannot remember them; the communities in North and South Carolina which are enabled by Duke money to build and support hospitals are not, so far as I have observed, oppressed by any such thoughts." He tells of a hypothetical sufferer from acute appendicitis who was rushed to one of these unequaled institutions and his appendix was promptly removed. The result—a speedy recovery with eternal gratitude to Mr. Duke. Did the building cure the patient or did the skill of the surgeon? The writer, from whom I quoted, would have the lay reader believe the building cured the patient while, as a matter of fact, the building was only a more convenient place in which to work than on a kitchen table. Duke made his money on tobacco and then finished up on water power.

Cattaraugus County, New York, has been under the care of the Millbank Memorial Fund for the last seven years and the experience of the County Medical Society of that county is decidedly against such control. I recently received a letter from the former president of the local society. They had gone to considerable trouble to get the opinion of the local profession and that opinion was def-



initely against the Milbank Foundation. A short quotation from the pamphlet recently sent out by the Milbank people follows: "The only shadow on the general success of the demonstration has been an attack in 1927 and 1928 by the County Medical Society. The difficulty appears to have been due in part to lack of tact on the part of the local representative." Too many lay persons are attempting to dictate who have neither the education, experience nor ability; yet, the reaction of the general public seems to be in favor of these incompetents provided they have behind them great wealth and are superficially plausible. I do not mean to condemn all welfare workers but I do not fancy persons who have no other recommendation but the name of a great foundation behind them coming to me and instructing me what to do and how to do it. I suspect, from the quotation above, that some such worker as I have described attempted to tell the Doctors of Olean how to conduct their affairs. Some foundations are not objectionable, in fact are to be commended as, for instance, the Rockefeller Foundation.

The committee on the cost of medical care should be named the "Committee on the cost of being sick." In a recent pamphlet, they go into detail about the health condition in a small mid-western city of possibly 30,000 population with a part time health officer; the profession indifferent, jealous, objecting to welfare work and giving no co-operation whatever. It is not a pleasing picture of the local profession in that town. In this town a patent medicine made locally was highly recommended by the president of the local life insurance company, by the judge of the Circuit Court and by the Chief of Police. It seems that any fake medicine, if it brings in a few dollars to a community, gets all kinds of endorsements.

There are said to be eight underlying dangers in our present economic development, one of which is the "high cost of medical care." It is said that medical service has not yet been organized as have other services such as buying radios, etc., and paying out of future in-

come. This is not a physician writing but a layman.

The physicians of the United States give \$400,000,000 free service annually and only one of five saves enough to compensate for his education. The amount spent for tobacco is three times the amount paid to the medical profession. Most organizations help the sick by asking and getting the doctor to contribute his work, but, they pay their own workers.

What shall we be like in 1950? The Shaw-Walker Company presents twenty definite prophesies. On the material side eleven are listed and the first is "A system of health and safety that will practically wipe out preventable diseases and accidents." On the social side the probable achievements are summed up as follows: first, "hospitalization and medical care will be available for all who need them."

Ray Lyman Wilbur recently wrote in part in the J.A.M.A. as follows: "Perhaps the medical school is not yet ready to insist on a training in economics, government, political science and history and the relations of medicine thereto; but, unless such training and thinking are soon started the present chaos in medical practice will inevitably make for high charges on the sick and an inadequate return to the physician."

There is already too much concentration in Washington Bureaus and States have notoriously shirked their moral and constitutional rights and duties. Several state societies have already gone on record as opposing the Shepard-Towner Act as federal meddling with the sovereign rights of states. The practice of medicine is a function, the regulation of which belongs at the State Capitol and not in Washington.

Changes in the future? They are coming; they are here. Twenty years ago we had muddy roads compared to cement slab now; a horse at seven miles an hour compared to the automobile at seventy. Other changes are radio, television, the mechanical telegraph, chain stores, combines and giant corporations controlling everything except, possibly,

the air and the air no longer belongs to the owner of the underlying terrain.

How soon will some master mind organize a coast to coast health association with practically absolute control of the medical profession? Banting's discovery of insulin would likely have netted such an association hundreds of millions. We would sign a contract before employment agreeing that any improvement or discovery would be the property of the health corporation and how they would fatten on a cure or method of controlling cancer or arthritis. You may say this cannot be; don't be too sure. I believe it can and will be unless organized medicine takes a decided stand; a stand not only for its own rights but for the common good. The medical profession will exist only so long as it serves the public.

We have been too long the meek and lowly; afraid to assert ourselves politically and too indifferent to act even if not afraid. Osteopaths, chiropractors and other irregulars are under no such inhibitions and they have prospered amazingly. For more than twenty years the osteopaths have been openly and without interference practicing medicine in Kansas. Our State Society has been unable to have the joker in the law set aside. When anyone says that the osteopath has as good training as the medical man, I say that he is either wilfully misrepresenting or else he does not know what he is talking about. The standards of their schools are very low and in no way compare to the standards of the regular medical schools. Our committee on legislation has done all it could do but they have not had the support of the profession throughout the state. There is no objection to the osteopath practicing osteopathy but it is objectionable for them to practice medicine and surgery under a trick law. There is no objection to a chiropractor practicing chiropractic but there is serious objection to him practicing physiotherapy.

At the Council meeting at Kansas City in January, Dr. Gray recommended that the Kansas Medical Society take membership in the State Chamber of Commerce. I got in touch with them and quote in part a letter received from Mr.

Samuel Wilson, manager: "For instance there might be medical legislation which was more helpful to the general public than to the doctors themselves, but which would never be accepted by the legislature as a bill fostered by one group. In such a case it would at least get a hearing before a committee of the State Chamber of Commerce and, if approved by them, it would come before the Legislature as a request of both professional and business interests." I had said nothing to Mr. Wilson except ask for data regarding the State Chamber of Commerce but he immediately saw the desirability of co-operation by our Society. The State Chamber of Commerce issues a pamphlet setting forth their aims. We have a reputation of being the state of muddy roads, and of having an anti-cigarette, Carrie Nation, cyclone complex. This pamphlet sets forth facts about Kansas but not one mention is made of our wonderful health conditions nor our efficient state and local health departments who guard the health of the state. The people who wrote that pamphlet simply didn't think about health and what an attractive item it would be to one seeking a location with money to invest and a family to raise.

A paper, in reviewing the acts of the recent legislature, remarks about the bill for crippled children and states that it was a very commendable act and would cost the state virtually nothing. Now our committee on legislation was sponsoring this bill and all members of the State Society are heartily in sympathy; but is there any mention made anywhere, by any one, of the skilled physicians who have spent money and years of study in equipping themselves with the knowledge and technique necessary to help these poor unfortunates? No. The legislature, however, is commended and the laymen are commended and the people throughout the state give credit where publicity has directed it. We do not want a display of embarrassing gratitude but we would like a square deal.

The legal profession has more than held its own the last two decades while the ministry and the medical professions have rather lost in popular esteem and



influence. It is important, not only to the ministers and physicians, that these professions recover their old time standing in the community, but it is vital to civilization itself. In six states, in order to practice law, an attorney must belong to the state bar association, an organization comparable to the state medical society. What a protest would go up if, in order to practice the healing art, membership in our state medical society would be required.

Criticism of our ethics comes in from all sides; some of it just and might well be taken into consideration. I want to quote at some length from an editorial in the Saturday Evening Post of recent date, because it appears to me to be a fair and unbiased statement of obvious fact. "National health is a perennial problem of prime importance. Every survey of its economic aspect alone employs figures running into billions of dollars. Several life insurance companies, and one in particular, actuated presumably by broad visioned business motives, are rendering services of signal value along lines of preventive medicine. The extent of popular medical education, though it has only begun to grow into what it is bound to become, is steadily broadening. It is unfortunate that our medical men, who are our logical preceptors in such matters, teach us so little about the fundamentals of their science. They are too busy; they are not to blame. They need no defense. Even when they are able to overcome these handicaps, the ethics of their profession frown upon their appearance in print except in the approved channels of the medical press." This editorial goes on to tell of the Harvard Medical School beginning a course of popular lectures by eminent members of her faculty via the radio and commends most highly the idea.

Along this same line I might call your attention to the daily newspaper syndicated health articles by such men as Bundeson of Chicago and Clendenning of Kansas City. They no doubt pay these men well for these articles. Why wouldn't they be glad to pay for equally well written articles sponsored by a state medical society? You may say off-

hand, it can't be done, but do you know it can't be done? It can and will be done if this society cares to take the trouble to put it over.

A note of warning about indiscriminate endorsements; how does it sound to hear, almost nightly, over the radio, some twenty thousand six hundred and seventy-nine physicians finding a certain cigaret less irritating? And the famous insurance examiners and other physicians with more or less official positions who are recommending sargon. Most of these endorsers are likely members of their county societies.

No system of medicine by state or foundation can be put into effect without the sanction of the medical societies, themselves. When I hear and read about the inevitableness of it, I know that only by lack of concerted action by us, ourselves, can it be done. The railroads, as you know, are being hard pressed by not only the economic depression but by competition by bus, truck, boat and plane. A late magazine states that there are three factions in the railroad world. The first faction is for doing nothing about the alleged unfair and unjust competition. The second faction is for co-ordination, called the co-ordinators, and is for recognizing the inevitableness of things and joining up with the trucks and busses. The third faction said fight and spelled it in capitals—cut loose against the whole thing, the unjust competition, and fight. Now which class is the medical societies going to pattern after? We have too long been patterning after the first two factions and now it is time to take up the cudgel and do what the third faction in the railroad world is doing—fight. Fight for the rights of the public which we serve, for the continued existence of a profession without which civilization cannot continue to exist. Is this far fetched? Not at all. Could a modern state exist without the medical profession? Did any civilized government ask any of our irregular friends in to consult about the state of our dough boys' health? Were they called in or did they volunteer to rid Panama of the deadly yellow fever or malaria so that the canal could be built?

Yet again, did the lusty, vociferous irregular go down into the mud of the Mississippi flood and clean things up? Where is the layman that could possibly hold a brief for the irregular in times of national disaster?

Let the state societies take the matter of ethics up through the A.M.A. House of Delegates. Even religion is changing its standards and many of its ideas—not basely but as times change and knowledge grows. We have made only spasmodic and puny attempts to educate the public and to let them know what is good for them and what is bad; rather we have left this to irregulars who are poorly equipped educationally and mentally and to the patent medicine makers who care for nothing but the profits. A number of county societies have tried newspaper-paid-educational-propaganda and I notice a recent editorial in the Journal states it has been practically a failure. Some new method must, therefore, be adopted. I strongly favor the idea of the health pamphlet that is being worked out by Dr. W. E. McVey.

I understand, from a reliable source, that the U. S. Public Health Service requires full time county health units, functioning with federal aid, to immunize all children, no difference what the economic status. This is wrong and should be vigorously resented by organized medicine everywhere. Don't imagine because you happen to be a specialist that it will not affect you. It will affect the different groups of specialists as well as the man in general practice. This is another reason for regulating medical practice at the State Capitol and not in Washington. I think we should cooperate with the Secretary of the State Board of Health and the State Tuberculosis Association in their publicity campaigns, if this can be arranged. I consider the State Board of Health and the various local health officers as most valuable allies of the State Medical Society. We should go on record as favoring county health units.

The faults within the profession, I shall mention only briefly. The general practitioner and the general surgeon are its very backbone and are indispensable.

The various specialties are cutting in, not alone on the general practitioner, but on the general surgeon as well. But, after all, the medical profession must be made up of all groups and we must and will stand or fall as a unit. I am glad to say in most communities professional jealousies have been banished and a finer ethical sentiment encouraged through more frequent meeting of county and district societies, and unprofessional acts are becoming more and more rare. It is coming to be recognized that digging a brother physician is the act of a small mind and stamps the inferior mental caliber of the digger.

Hospitalization is too expensive. The buildings and equipment are needlessly ornamental and expensive, making the cost per patient-day too high. How many who contribute on tag day to a hospital can afford to pay the six to ten dollars per day, when they become sick, to enjoy the service of this same hospital? Only a small per cent. This price is all right for those who are able to pay, but only a few are in this class. Here is an idea, and I wish you would think it over before condemning it; five hundred and four men in the United States each paid tax on an income of a million dollars or over, and many on much over. Now the country that furnishes a civilization and government that makes it possible for these men to make such enormous profits, should have the moral and legal right to take sufficient of that profit to build good, modern, non-decorative hospitals to take care of the less fortunate who make a hundred or so a month. It is necessary to have millions of these low-salaried men and women in order for the billionaire to have a market for his products enabling him to make these large profits. These same poor Johnnies who are compelled to accept the charity of a few "Foundations" are the ones who will protect the property of the Fords and Rockerbilts, when menaced by the yellow hordes or the Reds of Moscow; and these poor Johnnies may not always be as docile as they have been in the past.

We have approximately twenty-two hundred physicians in Kansas and about



fifteen hundred belong to the state society; our usual attendance is about five hundred for the second day and probably two-thirds of that number on the first and third days. Fewer than one hundred actually do anything about the affairs of the society or appear much concerned. This criticism is an indication of the lethargy of the average of us. Gentlemen, it has simply come to this: if our fifteen hundred members do not take an active interest in medical politics; if we limit our membership activities to three or four days a year; if we criticize the state society for not doing anything, yet do nothing ourselves; if we complain about the irregulars and do nothing about it; if the selfish in our own ranks make all the noise; if the irregulars continue to practice medicine; why, we deserve to go out of business. Why are legislators more afraid to offend the irregulars than they are of offending the regular profession? I will leave the answer to you; it seems obvious to me.

Summary: To Vitalize Organized Medicine.

(1) I want to recommend the health pamphlet proposed by Dr. McVey.

(2) Lease time on WIBW or some other radio station for one-half hour each week day except Sunday from twelve-thirty to one p. m. if possible.

(3) Affiliate with the State Chamber of Commerce.

(4) See that every eligible physician in Kansas is an active member of this society.

(5) Remember the slogan of the third group of railroad men, fight.

(6) Let us be a compact, cohesive organization not afraid to use our organization's power in state politics and remembering it is the state and not the national government that we should look to.

(7) It should not be hard to convince the hard-headed business men who head the railroads, insurance companies and giant corporations that it is for their good to have their employees and customers looked after by a living, fighting, progressive medical profession.

(8) Closer co-operation with state and county health departments, and with

certain other selected agencies having to do with the public health.

(9) I believe a health column in our large papers, sponsored by such an important unit of organized medicine as the Kansas Medical Society, would be more popular with more people than the column of any individual and I say this without detracting in the least from present writers. I recommend this society take such steps as are necessary and approved by this society, for the completion of this idea.

In closing, I want to again thank the members of this organization for the honor shown me and I want to assure you that I am ready and willing to perform all the duties assigned me under the constitution and by-laws, and more, as far as my ability permits. I hope that all officers and members of this society will feel free to call upon me for any service I can render. I appreciate the help and kindly advice of the editor of our State Journal, the various committees and county officers who have so promptly responded to requests from my office. Also the councilors and the secretary who have co-operated so willingly.

At the final reckoning will we be satisfied to say:

"I have finished my course"  
or will we be able to proclaim,

"I have fought a good fight,  
I have kept the faith."

—R—

### Multiple Neurotrophic Joint Disease of the Charcot Type With Case Report

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Disturbance of neurotrophic function resulting in neuro arthropathies are by no means uncommon, yet the modern text book gives little information regarding their etiology or microscopic pathology, and statements relating to gross pathology of these conditions are, as a rule, so conflicting that they present little of value in their study. As part of a general process dependent primarily on sensory nerve impairment, these conditions are of paramount interest to the neurologist, though from the literature available it appears that the

condition has presented more of interest to the surgeon than to the student of neurologic problems. In 1831 Mitchell<sup>1</sup> reported the occurrence of arthropathies coincident or associated with Pott's disease with paraplegia and presenting the general characteristics of the phenomena later reported by Charcot<sup>2</sup> who mentions Mitchell's report but was inclined to regard the cases described by him as a proliferating osteoarthritis differing from the phenomena he (Charcot) reported.

The popular conception of the phenomena described by Charcot is that of a painless progressive, ultimately disabling and destructive arthropathy. This conception is fundamentally correct but it is being broadened and elaborated as these conditions are made the objective of more critical and intensive study. The Roentgen ray has undoubtedly been the greatest single factor in stimulating renewed interest in the subject and in demonstrating the relative frequency of the occurrence of arthropathies of the Charcot type involving the vertebra. The fact that they occur in this location without presenting deformities that may be determined by physical examination, without pain or muscular rigidity, or impairment of mobility, has doubtless contributed largely to our belief in their comparative rarity. Rogers (quoted by Sutherland)<sup>3</sup> could find but 60 cases of spinal disease of Charcot type reported in the literature in 1925. This number has been increased by those reported by Garvey and Glass<sup>4</sup> and Herndon.<sup>5</sup> There are instances<sup>6</sup> where hyperalgesia of the skin is present and pain incident to swelling of the soft parts is pronounced and in many cases where the bony change is accompanied by marked tumefaction of the overlying soft tissue, considerable pain is present due to tissue distention. The course of the pathologic process is usually progressive but may become quiescent at any period and the proliferation of new bone formation may frequently suggest the possibility of other arthritic manifestations which because of a negative serology may lead to difficulty in diagnosis. Not infrequently the roentgenological picture in the early

stages of this disease is strongly suggestive of bone sarcoma or tuberculosis, the precedent history of trauma that is frequently given contributing to such error.

Opinions relative to the exact pathogenesis of the factors that ultimately destroy and disintegrate the bony tissue involved, are neither numerous nor especially enlightening. By some the theory has been advanced that a specific selectivity on the part of certain strains of the *treponema pallida* may be regarded as the predominant factor, and that the spirochete by virtue of its special affinity acts directly and not remotely as a destructive agent. However, as joint lesions of this type occur with marked frequency where there is no reason to suspect luetic infection, such a postulation is not tenable. It must be recalled that osteal destructive changes somewhat similar to those described by Charcot are found in leprosy and although practically all leprosy lesions excepting advanced necrotic states show the lepra bacilli in abundance, no record of their discovery in these bony lesions is available.

Microscopically there is no evidence at any stage of these arthropathies of bacterial agencies in their causation, the primary bony proliferative process being merely a tissue reaction to irritative stimuli without adequate trophic correlation. Despite the statements of writers who claim that by the exhibition of anti-luetic or other forms of treatment improvement or arrest of the condition has resulted, there is no ground for assumption that any form of therapy up to the present time has a proven value, and whether the changes noted are due to sensory lesions of central origin, to a posterior ganglionic irritation, or to more distal peripheral nerve injuries, the variety of diseases in which Charcot's phenomena occurs seems sufficiently protean to exclude the theory of a bacterial excitation, although the possible effect of virus or toxins cannot be so readily excluded.

The variability of the pathologic picture presented has resulted in much confusion and disagreement as to the nature



of the process. While all agree that the pathology exhibited is ultimately destructive, there is lack of unanimity of opinion in regard to the initial pathologic changes. The painless, crepitating "bag of bones" described by our text books is now recognized as the terminal manifestation only, of a pathologic process whose vagaries and variations cover a wide range of progressive bony change, presenting widely different pictures at different stages.

In the minds of many, the condition is associated with, and considered a part of, para syphilitic pathology, an impression derived no doubt from the failure of many modern text books to clearly define the basic neural pathology upon which subsequent osteal and articular change is dependent, apparently ignoring Charcot's<sup>2</sup> theory of causation, *ie*—disease of the central nervous system which in many instances may be entirely unrelated to luetic infection. The apparently irremedial nature of the pathology presented has also tended to discourage a more profound study of the condition.

The pathology of the condition seems to follow a fairly uniform sequence characterized by

(1) Loss of deep joint sensibility which permits the joint to be traumatized without pain. There progressively follows,

(2) Stretching, sometimes rupture of the joint capsule, relaxation of the supporting ligaments of the joint permitting an abnormal range of mobility in all directions which leads to

(3) Trauma to the desensitized joint surfaces and

(4) Destruction of the intra articular ligaments and articular cartilage with

(5) Progressive erosion of the articular surfaces and

(6) Irritative non-compensating peri articular and parosteal bone proliferation, and as terminal pathologic phenomena

(7) Bone disintegration, fracture and disorganization.

For many years despite the observations of Mitchell the condition was regarded as a tabetic arthropathy until its

frequent incidence in cases of syringomyelia stimulated further study, not only confirming the original observation of Mitchell and the theory of Charcot<sup>6</sup> but demonstrating its occurrence in many other conditions wherein joint sensibility was impaired.

The present unsettled controversy as to whether or not articular structures are supplied with nerves of purely trophic function led to the conclusion



Fig. 1. Showing para articular bony overgrowth and fragmentation of external condyle

that while loss of articular pain sense was the precipitating factor, the earlier structural changes were the result of continued trauma to the joint structures, particularly in the usual sites of predilection in this disorder. Eloesser<sup>7</sup> seems to have clearly proven this in his experiments. While it was commonly held that the sensory impairment was dependent upon a central lesion, later writers aided by the tremendous number of peripheral nerve injuries incident to the World War, were impressed with the relative frequency of arthropathies apparently clinically identical with those described by Charcot in which peripheral nerve injury was the only definite neurologic factor demonstrated. The fact that these arthropathies when occurring in the tabetic occur as early or pre-ataxic phenomena and the fact of the recognized hypermobility of tabetic joints farther

supports the postulation that joint trauma plays an important role in the bony proliferative process. The relationship between sensory and trophic function is not demonstrated, but that such relationship must be responsible for the later disintegration and disorganization not only of the original osseous structure, but of the bony overgrowth as well may be taken as a rational hypothesis.

While exhibiting points of predilection as the knee, shoulder, ankle, hip, or elbow, no part of the osseous structure may be regarded as exempt from attack, and multiple arthropathies of this type have been frequently recorded.

These arthropathies are of frequent occurrence in syringo myelia, some authors<sup>8</sup> stating that 25 per cent of syringo myelitics present typical joint involvement. Tabes, transverse myelitis, amyotrophic lateral sclerosis, spina bifida, paraplegia and spinal injury with impairment of cord function sometimes present the typical Charcot phenomena attributable to sensory impairment of central origin. A more recent contrib-

utor<sup>9</sup> reports the occurrence of joint changes presenting the characteristic Charcot phenomena in injuries to the brachial plexus, stab wounds of the back and other peripheral nerve injuries, tending to show that these conditions are not entirely dependent on sensory lesions of central origin but may follow peripheral nerve injuries in certain locations.

The following case is reported because of the multiple arthropathies presented, the rapidity of their development and more particularly the spinal involvement which is comparatively rare.

#### CASE REPORT

The patient, a white male, aged 37, railway employee, gave the following history:

Though delicate and undersized from early life he had been robust and able to make a living. No serious illnesses or diseases of childhood other than the acute infections are recorded. Luetic infection occurred in 1911. No immediate treatment was given. In 1918 the first manifestations of tabetic involvement



Fig. 2. Showing mass infiltration and bony proliferation in both feet



appeared when crises of pain were first manifested. These while first appearing as typical lightning pains gradually increased both in frequency and severity.

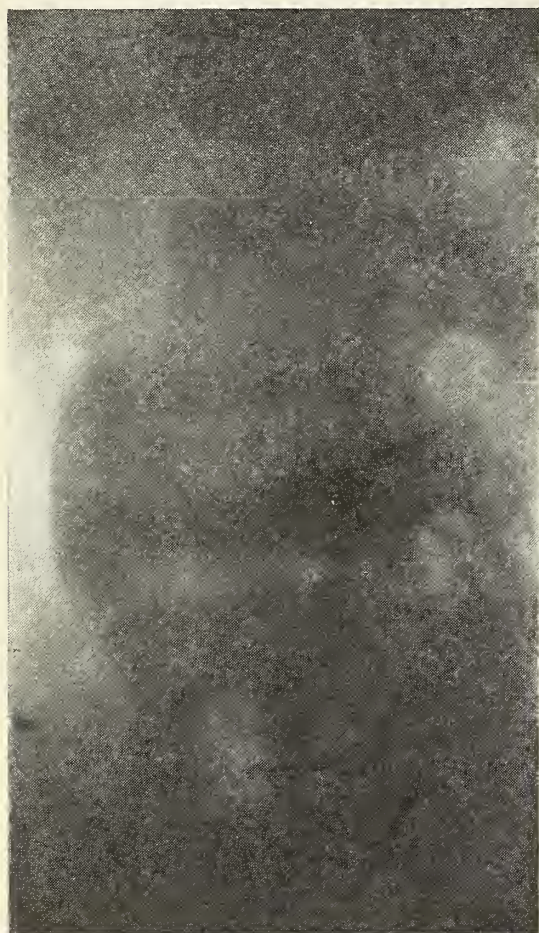


Fig. 3. Distortion and overgrowth involving lumbar vertebra

These led him to seek medical advice and he was treated in St. Joseph's Hospital, Kansas City, Missouri, for a time with considerable relief of painful symptoms. In 1917 he first noticed a swelling of the right knee which was gradual in onset and entirely painless. This did not interfere with his following his vocation as locomotive fireman. About a year later he first noted grating of the joint but there has been no pain and only moderate disability from the enlargement. In 1918 patient fell while working as a fireman and suffered an intracapsular fracture of the right hip. Only fibrous union resulted with a shortening of  $1\frac{3}{4}$  inches. Anti-luetic treatment was initiated in 1921 without ap-

preciable relief of his crises. But in the interval before entering St. Joseph's he had been operated for some abdominal condition presumably provocative of the pain from which he suffered. I am told this operation revealed a negative pathology though the appendix was removed. In 1926 he entered Bell Memorial Hospital, Kansas City, where he was treated for a time in the regulation way and later inoculated with malaria. He was permitted to have some 18 chills when, because of his weakened condition, these were stopped. The crises as well as the arthropathies were seemingly uninfluenced by treatment. The continued and increasing paroxysms of pain before his entrance to Bell Memorial had resulted in the acquirement of a narcotic addiction and at the time of entering the hospital he was taking from two to three grains of morphine per day. On entering Bell Memorial he was placed on the service of Dr. A. L. Skoog who recently<sup>28</sup> reported one of the interesting and unusual morbidities he presented.

He was admitted to the Osawatimie State Hospital, April 2, 1928. The provocation being a transitory hallucinosis. On admission the patient was fully oriented and showed no tendency to morbid attitudes of thought although admitting a previous fleeting hallucinatory period. Principal complaint was that of extreme pain occurring in definite cycles and fully corresponding to tabetic crises. He was able to intelligently and relevantly discuss the progress of his malady. During the entire period of treatment in other hospitals his serology had been negative.

#### EXAMINATION

*Developmental Defects:* None apparent.

*Malformations:* Moderate scoliosis, slight kyphosis. Slight deformity of right hand from traumatic injury of fifth metatarsal. Right leg  $1\frac{3}{4}$  inches shorter than left. Right knee enlarged.

*Nutrition:* Fair.

*Skin:* Negative except for slight pigmentation. Skin appendages normal.

*Glandular System:* Axillary, inguinal, cubital and post cervical adenopathy.

*Digestive System:* Mouth, teeth and naso-pharynx negative.

*Circulatory System:* Blood pressure left arm 108/70, right 118/70. Fluoroscopy shows the heart displaced downward and to the right. Pulse rate is normal and there are no evidences of cardiac pathology.

*Respiratory:* Negative.

*Abdominal:* History of crises of pain at intervals from 1917 to present time, increasing in severity, accompanied by nausea. Abdomen is slightly distended. There is no tenderness, rigidity or evidence of pathological change in the viscera. Old abdominal incision scar.

*Genito Urinary System:* Scar of original infection said to have been acquired in 1911. Slight pigmented scars on sacrum and gluteal region.

*Blood Examination:* Reds 4,090,000; polymorphs 98; lymphocytes 2; no eosinophilia. The serology of the blood and spinal fluid has remained negative throughout. The urine is negative.

*Neuro Muscular System:* There is general weakness, particularly of the lower extremities. Slight lordosis due to hip joint involvement. No determinable ataxia, Rhomborg or other forms of incoordination. There is slight impairment of position sense.

*Reflexes:* Eyes show a typical Argyle-Robertson pupil. Biceps and triceps present though greatly reduced. Patella and Achilles present but weak. Abdominal and cremasteric present. There is no definite disturbance of muscle sense noted. There are no tremors, fibrillary twitchings or speech defects. The sphincters are fully controlled.

*Segmental Nervous Disturbance:* Posterior ganglionitis dating from 1921 with recurrent attacks of herpes zoster confined to the sacral region, sometimes unilateral, sometimes bilateral, these occurring at intervals of three to six weeks, preceded by pain or burning sensation. Duration of these herpetic cycles about nine or ten days.

*Sensations:* Pain, temperature, tactile and stereognostic sensibility unimpaired.

*Osteo Arthritic Manifestations:* First noted by the patient in 1918 in the right knee, painless and progressive in de-

velopment. Injury to the right hip (probably a pathological fracture) in 1918 with non-union. In 1927 noted enlargement of right foot and in May, 1928, slight enlargement of the left foot. Late in July, 1928, the left hip was enlarged and there was a feeling of tension and stiffness but no severe pain. The soft tissue showed marked tumefaction without increased surface temperature. The *x-ray* disclosed arthropathies involving both knees, both feet, both hips and the second, third and fourth lumbar vertebra.

The symptoms presented of lightning pains, gastric crises and Charcot joint are quite indicative of the diagnosis. To these are added the occurrence of herpes zoster of recurrent type and occasionally as a bilateral manifestation. The involvement of the vertebra in the pathologic picture is perhaps the most interesting. The occurrence of multiple joint lesions of the type described by Charcot are not uncommon, though involvement of the vertebra is comparatively rare. Garvey and Glass<sup>4</sup> have recently reported four cases which added to the 60 already recorded in the literature shows the relative infrequency of reported spinal lesions of this type. In the case presented in addition to involvement of both hips, both knees and both feet the second and third lumbar present typical bony overgrowth. It is possible that the sacral region may show pathologic changes that may readily account for the irritation of which the recurrent zoster is an expression. Possibly many cases presented as Charcot joints are amenable to some other classification and it is quite possible that there are on the other hand, many cases that are unrecognized because their symptomatology is not classical and too much emphasis likely to be placed upon a negative serology. Murrell<sup>10</sup> reports an arthropathy of the knee in a patient with a luetic history of five years duration. The onset of the joint involvement was extremely acute accompanied by great pain and occurring during the height of an attack of specific urethritis. The condition ultimately yielded to treatment and in this case the diagnosis doubtless was errone-



eous. Houget<sup>11</sup> reports an arthropathy of the hip of the Charcot type on which Whitman's operation was performed. Three years later no new bone had been formed but apparently the pathology was not progressive. Cotton<sup>12</sup> cites a number of cases classified as Charcot joints. He regards the condition as a syphilitic arthropathy stating that it is found only in syphilis. He reports excellent results from supporting appliances and anti-luetic treatment. Thomas<sup>13</sup> reviews pathological fractures in tabetics without contributing to a clearer understanding of the condition, although Potts<sup>14</sup> gives a critical, succinct and clarifying presentation of the salient pathologic features. The patient presented has been intensively treated since early in 1926 both with arsenicals and malarial inoculations. Neither the occurrence of crises or the progress of the arthropathies have been noticeably retarded by treatment.

The neurological importance of these arthropathies is emphasized by their close resemblance to malignant or tubercular conditions especially in their earlier stages, where moderate or even negligible bony change is sometimes accompanied by an unusual degree of soft tissue tumefaction with the moderate pain incident to tissue distention which may readily suggest malignancy and lead to ill advised surgical intervention.

The liability to mistaken diagnosis in these cases is emphasized by Roberts.<sup>15</sup> He states that in 26 out of 51 cases reported by him, a diagnosis of tuberculosis of the joint had been made by competent and experienced surgeons.

Jones<sup>16</sup> in discussing this type of arthropathy adds as further etiologic factors anemia, and peripheral neuritis. He calls attention to the fact that in tabes the lower extremities are more prone to develop arthropathies while in syringo myelia the upper extremities are apparently more frequently affected. He speaks of the condition as presenting two types, *ie* hypertrophic and atrophic, although it is quite possible that these can not be so classified because of the variations in manifestation at different periods of the disease and represents

only various stages of a single process.

Gormly<sup>17</sup> discusses these arthropathies as occurring in syringo myelia. Chipault<sup>18</sup> calls attention to the possible role of Potts disease and injuries to the cord by spinal fractures and tumors of the cord and its covering and cites several cases following injuries of this type. Turney (quoted by Gormly)<sup>19</sup> calls attention to arthropathies of the Charcot type observed in leprous patients. Steindler<sup>20</sup> gives a splendid discussion on the nature of the periosteal and pararticular bone proliferation in these conditions and calls attention to the fact that these bear no resemblance to normal bone in trabeculae or lamellar arrangement. He reports that the Wassermanns were negative in 33⅓ per cent of tabetics coming under his observation presenting this phenomena. He calls attention to the fact that pain is not uncommon in these conditions and in those in which a fairly sudden onset is observed, the acute phenomena is attributed to the rapid breaking down of bone tissue that doubtless had been the seat of a disease process for some time preceding. That there may be other types of arthritic disorders where a possible confusion may arise is emphasized by Whitney and Baldwin<sup>21</sup>. They report 544 cases of syphilis, 15 per cent of which presented joint lesions. About half of this number showed lesions involving the spine, but their observations did not clearly determine whether the joint lesions recorded were definite neuroarthropathies or other types of syphilitic spondylitis.

Little<sup>22</sup> reports a case of Charcot disease of the spine involving all the lumbar vertebra but more particularly the second and third in which there was extensive bony overgrowth and new bone formation. He reported 111 cases of syphilis involving joints, 18 of which presented the Charcot phenomena and in only two of which spinal involvement was shown.

Ridlon and Berkheiser<sup>23</sup> reported the largest series of spinal arthropathies classed as Charcot phenomena. Their report comprised ten cases, 9 occurring in men and one in a woman. The lumbar region alone was involved in all cases.

The average age of incidence was 44 years. They call attention to the belief of previous writers that this condition occurred only in the cervical region, quoting J. Ramsey Hunt as stating his doubt as to whether this arthropathy ever occurred in the lumbar region.

Green and Scully<sup>24</sup> reviewed the literature and reported three cases of bilateral involvement of the hip joint. Henderson<sup>25</sup> studied 246 cases in which the lesion was pre-ataxic in 54, transitional in 36 and ataxic in 156. This is not in consonance with our belief at the present time that the majority of these arthropathies involving the lower extremities precede the ataxic stage. Fisher<sup>26</sup> states that many cases of bone and joint syphilis in his experience give a negative Wassermann reaction, while Horwitz<sup>27</sup> believes that Wassermann confirmation is present in less than fifty per cent of these cases. Cofield<sup>28</sup> says "Charcot Joints whether occurring in the spine or elsewhere are recognized at the present time as being due to syphilitic infection." As this author quotes references as late as 1922 his statement emphasizes the current impression that this condition is attributable to luetic infection only.

#### CONCLUSIONS

A review of the available literature indicates that our comprehension of these arthropathies embraces a variety of opinions, many of which are based on an entire misconception of their neural provocation. The bulk of the literature at the present time may be accredited to internists and surgeons and it would seem that very little has been written from the neurological standpoint bearing upon this subject. Also it appears that the majority of our pathologists have given rather scant attention to the pathology of Charcot joints so far as may be judged by the modern text books consulted. Their clinical frequency, the variable pathologic factors presented in their progressive stages, the possibility of limitation of the disabilities they inevitably produce by appropriate early treatment, and the frequently misinterpreted symptomatology leading to radical procedures which may hasten rather

than arrest the bony destruction, the fact that no satisfactory remedial agencies have been developed up to the present time, notwithstanding reports of improvement or alleged cure under anti-luetic treatment, and the further fact that primarily, arthropathies of this type fall legitimately within the province of the neurologist, suggests a more careful and critical survey of this field and the phenomena it presents. The tenacity with which many writers cling to the conception of the luetic factor in these conditions is an indication of the lack of clarity in the average text book exposition, that deals with the fundamental neurologic factor concerned in the production of these pathologic changes. It is quite probable that with the advances in Rontgenologic technique and application, our viewpoint may be considerably changed within the next few years. Twenty-five years ago it was believed that no case of Charcot's disease involved the lumbar segments; that when the spine was involved the cervical region was the site of election. The literature of today indicates practically a hundred per cent of cases showing spinal involvement exhibit changes in the lumbar vertebra only.

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—R—

If it takes eleven law enforcement commissioners nineteen months to disagree about Prohibition, how long will it take 130,000,000 citizens to reach a unanimous verdict?—San Diego Union.



**Letter from A Kansas Doctor to his Son**

JOHN A. DILLON, M.D., Larned

My dear Boy:

We received your letter giving us your grades for the past semester and wish to say they seem very satisfactory. I do not quite understand just how they grade now, nor how much is expected of a freshman medic; but the fact that you of your own accord sent them home, indicates they are at least passable.

Your Mother is not at all surprised at your good showing, in fact mothers seldom are. She has made excuses and explanations for your shortcomings for twenty-two years and is still willing to carry on in similar vein. I have not always agreed with her when she has attempted to justify some of your empty-headed escapades.

Possibly you do not remember when you played hookey and went fishing when you were ten years of age. About the only excuse your Mother could offer was the fact you had a wart on your hand that made you nervous, and if I, as a father and medical man, had been on my job you would not have been allowed to get into this lamentable condition. This logic combined with the three-pound bass you brought home mitigated your punishment, although, as I recall you did get home too late for the picture show.

Mother instinct, mother love or whatever it may be called, is unreasonable, illogical, noble and self-sacrificing, and the boy or man who has missed it has not had a square deal in life. I am mentioning this to remind you and your younger brother that your Mother is on the job back home and whatever you may accomplish at college, rest assured her grades will run along about 99 plus.

By the way, I strongly suspect your younger brother has not been keeping up on market reports, finance, etc., and has not heard that times are hard. You probably can get this information over to him in a more diplomatic way than I as he is inclined to ascribe an ulterior motive to any advice I might offer. You might also explain to him just what the word "allowance" means. Up to date

checks signed with my name and fortified by his initials underneath have satisfied the bank, but I fear should my funds run out, the initials might not be honored—bankers are very unreasonable at times.

I have just returned from Manhattan where was held our three days' State Medical Society Meeting. A goodly number of the old crowd was there, but not all. They never all come. Some are kept away by illness, others have good reasons for not attending; and always one or two have gone on their last "call"—may they receive their well-earned mileage fee.

It was gratifying to note the enthusiasm of the younger men who are coming on in the profession. We, who have been in the work for many years, gradually lose our initiative and interest in the practice outside our own line of work. We welcome into the ranks the younger men who bring with them the visions and ambitions that go with youth.

I counsel you to always have in mind, affiliations with medical groups and societies and lose no opportunity to take advantage of such meetings. The doctor who fails to do this finds himself slipping and his clientele is the first to discover it. The man of medicine, who never takes post-graduate work nor attends medical meetings, finds himself sooner or later using onion poultices and speaking of the prostrate gland.

Mother and I are in good health and trust you are the same.

With love,

DAD.

P. S.—Don't study too hard.

—————R—————

**TUBERCULOSIS ABSTRACTS**

When as a young man Sir Robert Philip, now professor of tuberculosis in the University of Edinburgh, announced his intention of specializing in tuberculosis, one of his wisest and kindest teachers said, "Don't think of such a thing. Phthisis is worn to a very thin thread. The subject is exhausted." Fifty years of untiring labor and leadership have dimmed neither the zest nor the perceptions of this pioneer. Recently, Sir Robert delivered the Malcolm Morris Me-

memorial Lecture on "The Outlook on Tuberculosis." After reviewing the past, he sounded the call for fresh orientation. Advanced disease of the lung, he said, has absorbed most of our interest in the past; it is time to shift attention more and more towards the earliest indications of tuberculosis infection. In this number of "Tuberculosis Abstracts," there is space only for comment on this phase of tuberculosis control. Sir Robert Philip's interesting and comprehensive monograph was published in the British Medical Journal of January 10, 1931.

#### . DETERMINING EARLIEST INDICATIONS OF INFECTION

Pulmonary tuberculosis is in reality a late, visceral manifestation of an infection contracted much earlier. The author has had opportunity in numerous instances to trace the development of tuberculosis in the same subject in ever-changing form from the seed stage up to full fruition, in some instances, for 30 years or more. The ebb and flow—the arrest and advance of the disease—are but expressions of the continuing contest between the invading organism and the resistance of the tissues of its host. While the invading organism is presumably little changed save in respect of numbers, the resistance offered varies endlessly as a result of intercurrent illness; accident, strain, and a host of environmental influences. Infection is the crossing of the frontier—the beginning of what is often a lifetime contest.

#### SCIENTIFIC ANTICIPATION

The hope of preventing the endless possibilities of subsequent mischief following infection led the author some years ago to recommend the systematic examination of contacts. The next step was to advise the search for the earliest traces of tuberculous infection in every child. As infection takes place most commonly during childhood, the tuberculin test, he believed, should become routine practice at stated intervals from early infancy onward. So long as the reaction remains negative, nothing further

is necessary. Whenever a positive reaction is obtained for the first time, the fact and the date should be recorded on the permanent medical history of the child.

If, after positive determination, the health of the child continues thoroughly good, we have the knowledge that the child's resistance is sufficient, and there is no call for treatment. On the other hand, the positive determination may illuminate many after-events. Vague conditions of "delicacy" in the child may find their explanation—for example, malnutrition, obscure feverish attacks, ill-defined lack of energy, so-called "disturbed action of the heart," which may interfere with the claims of education and sport. Such conditions are very frequently the expression of tuberculous infection. Further, the occurrence of incidental illnesses, such as measles and whooping-cough, will call for watchfulness, and care will be taken to secure complete convalescence after such attacks. The doctor will insist on the maintenance of a high level of resistance, more particularly in relation to school life, the period of adolescence, and the time of entrance into more responsible life.

#### . DETERMINE THE FACT AND DATE

Preventive medicine may wisely take a lesson from the sphere of agriculture. The practical farmer who seeks to raise a tubercle-free herd has learned the value of the tuberculin test. A method for the early detection of tubercle which is worth the farmer's while on economic grounds has still greater significance and wider efficacy—both medically and economically—in dealing with the human race.

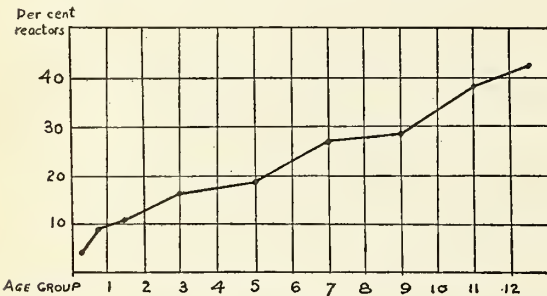
Sir Robert Philip would not make a formal distinction between reactors and non-reactors but recommends the routine practice of determining the *fact* and *date* of the initial infection in every child. That is a service which might well commend itself to the American physician, who is growing increasingly interested in preventive medicine and strives to render to his families a positive health



service. *The Outlook on Tuberculosis: Changing Orientation, Sir Robert Philip, The British Med. Jour., Jan. 10, 1931.*

#### PAPER STIMULATED WIDE INTEREST

Sir Robert's paper immediately stimu-



Mantoux Reactions of 1,286 Children—Bellevue Hospital, New York, from 1921 to 1928. (From "Tuberculin Skin Reactions," C. H. Smith, Am. Jour. Dis. of Children, Dec., 1929.)

lated much discussion among the medical profession of England and Scotland. The comments were, on the whole, favorable and reflected the deep respect which is felt by doctors and laymen for the genius and leadership of the author. To him, said one writer, is due almost entirely the present favorable position of the campaign against tuberculosis. The comments, together with Sir Robert's final rebuttal were printed in subsequent issues of the *British Medical Journal*. Some of these are briefly abstracted below.

Robert Carswell raised this question: Supposing the fact and date of tubercularization has been duly noted in relation to each child; what practical use is now to be made of the information? Excluding specific methods of immunization or "detubercularization," Sir Robert Philip's answer, he says, is too nebulous. He believes that a more definite attempt should be made to immunize the child (presumably by some form of vaccination.) In spite of many failures, there has been sufficient success with preventive immunization, supported by ordinary hygienic measures, to make it more than a hope, and he submits that a demonstration to prove the value of detubercularization is the next most important step in the campaign against tuberculosis.

#### TEST A CLUE TO SOURCE OF INFECTION

John Gibbens takes issue with that part of the essay which implies that mal-

nutrition, obscure feverish attacks, lack of energy, and the like may be the expression of tuberculous infection in a child who reacts positively to the tuberculin test. Tuberculosis carries with it too great a stigma to justify anyone in diagnosing it easily in such delicate children. The value of the positive Mantoux test, he says, lies rather in stimulating the doctor to get the child back to full health as rapidly as possible. Gibbens admits that knowledge of the fact of tubercularization is extremely important but for another reason; namely, that the earlier the age at which a positive reaction is found, the more likely is one to find the adult that is disseminating the infection.

W. Camac Wilkinson emphasized that the environment of the child is the source of infection. Too much attention cannot be paid to the environment of the child if we wish to tackle infection at its source. "Neither fresh air nor sunshine can prevent tuberculosis in children living in the houses of consumptive parents."—*The British Med. Jour., Jan. 24, 1931.*

Sir Robert Philip in his answer disclaims responsibility for misunderstandings voiced and reiterates that to the question, "Have we reached finality?" an emphatic negative must be given. He repeats his plea for the systematic search for, and determination of the fact and date of initial infection in every child, primarily so that the information may be kept in view throughout the further life-history of the individual in order that, if indications of progressive tubercularization supervene, they may timeously be met by measures of detubercularization.—*The British Med. Jour., Feb. 7, 1931.*

—R—

Doctor: "What is the most you ever weighed?"  
New Patient: "154 pounds."  
Doctor: "And what is the least you ever weighed?"  
New Patient: "Eight pounds."—Koch's Messenger.

✱ ✱ ✱

Nature doubtless is grand but it wasn't a very brilliant scheme to put most of the vitamins in things you don't like.—Brooklyn Times.

✱ ✱ ✱

A specialist is one who has his patients trained to become ill only in his office hours. A general practitioner is likely to be called off the golf course at any time.—Kansas City Star.

# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - - Editor**

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### THE ANNUAL MEETING

The meeting at Manhattan was a pleasant surprise. Past experience had convinced most everyone that only a small attendance could be expected at meetings held in cities of that size. A few years ago that would have been inevitable under similar conditions for there was a heavy rain Monday night and the dirt roads were in bad condition. The total attendance at this meeting was over 400 which places the 1931 meeting among the most successful. The meeting in 1930 at Topeka had the largest attendance in the history of the Society. The "guest day" plan, which originated in Topeka in 1916, was adopted and the same plan continued for the meeting at Manhattan. One must naturally conclude that the members appreciate having the guest speakers all on one day. It did not, as predicted, spoil the attendance on the first and third days. The inability of Dr. West to fill his engagement with us was a great disappointment and except for the fortuitous presence of Dr. Von Groff of Vienna in Kansas City and his willingness to appear on our program part of our time

on Wednesday would have been idle.

The program as a whole was unusually good, but the delegates were again compelled to miss the Thursday morning program. If it is impossible to arrange for meetings of the House of Delegates except at times when papers are being read in the general session, then the House of Delegates should meet and transact its business on the day before or the day after the regular session or at some other time in the year. A considerable number of the delegates present on the first day did not stay over for the last meeting.

The president, Dr. Duncan, had a very interesting address in which his zealous devotion to the interests of the Society was readily recognized. He made a number of suggestions for the betterment of the Society and these were all approved by the committee which was appointed to report on these suggestions to the House of Delegates.

He suggested that the Society should affiliate with the State Chamber of Commerce. The committee reported favorably on this suggestion and the House of Delegates authorized the Secretary to take out six memberships in that organization.

He suggested that all of our surviving ex-presidents should be ex-officio members of the House of Delegates. This was approved by the committee and an amendment to the Constitution, so providing, was introduced and will be acted on at the next annual meeting.

He advised the continuation of our publicity campaign and suggested the adoption of a plan for the publication of a popular health magazine that had recently been proposed by the Executive Secretary of the Bureau of Public Relations. The committee recommended that this also be approved, that the money appropriated for the Bureau and



its activities be concentrated on the publication of such a magazine.

This plan was outlined in the March number of the Journal. A meeting of the Bureau will be called immediately and the work of inaugurating this venture begun.

#### THE MAGAZINE

The plan for the proposed popular magazine has already been pretty well outlined in the Journal, March, 1931, and in the circular letter mailed to the members some months ago. It will contain articles on medical subjects written by members of the Society. It is suggested that those who wish to contribute such articles send them in as soon as possible. It is the purpose of these articles to tell the people what scientific medicine has done and is doing for them. It is not our purpose to tell them how to diagnose and treat their own diseases. No doctor can tell in a few words, how to do the things he has spent years learning how to do. These articles must be written in language the people can understand and in no case will the author be permitted to exploit his own particular knowledge or skill. Each of these articles will appear under the name of its author.

There will be a department on the prevention of disease, conducted by the Board of Health.

There will be a department on home nursing, food and food preparation, and other features of interest to the housewife.

There will be a department for children with children's stories, descriptions of games and amusements of various kinds.

Every effort will be made to publish a magazine that will be interesting to all members of a family and at a price they can afford.

In order that it may be quickly established and in order that its mission may be accomplished, the members of the Society are asked to promote its circulation. It is only by co-operation that any publicity campaign can be successfully carried on. The benefits accrue to every member and every member should do his part.

If every member will send in subscriptions for at least ten of his patrons our magazine will start with 15,000 subscriptions. Your patrons will appreciate a courtesy of this kind from you for it will show that you are interested in them. It will not be necessary to continue this from year to year. If after a year they do not think it is worth fifty cents we will gain nothing by continuing to send it to them. You will not be limited to ten. You can send in subscriptions for every one of your patrons if you wish, and we feel sure it will be the best investment you ever made.

Your response to this appeal will indicate how much you are interested in combating false propaganda and in restoring the confidence of the people in the medical profession.

As soon as some necessary preliminary work has been completed blanks for subscriptions will be mailed to each member.

#### OUR NECROLOGY REPORTS

It was at the annual meeting held in Ottawa in 1919 that a resolution to appoint a committee on necrology and give its report a place on the program was adopted. Prior to that time, resolutions were sometimes submitted in commemoration of some deceased member who had been particularly prominent in the Society's affairs or had attained local prominence in his profession. It was Dr. Liggett who called the members' attention to our seeming indifference to the

passing of our professional associates. For a few years the report of the Committee on Necrology was given in the general session, but frequently it was passed and ultimately the report was called for in the meeting of the House of Delegates and filed for publication without being read.

In order to make the annual report more impressive a plan was adopted in which an hour on the program was set aside for short memorial talks by members from the communities where the deceased members had lived. This proved to be impractical because only a few of those who were requested to make these talks responded.

These reports are very carefully prepared, a great deal of time and effort being expended in their preparation. They are of much statistical value, though apparently regarded as uninteresting parts of the program. And no matter how carefully prepared they fail to convey that spirit of reverence for which they were given time on the program.

The Arkansas Medical Society holds a memorial session at its annual meeting. This year it was held at the Baptist Church, in joint session with the Auxiliary, from 8:30 a. m. to 9:30 a. m. on the second day of the meeting. There was an invocation, two or three addresses and some appropriate music. There is really no good reason why our Society should not devote an hour to so good a purpose.

#### THE GENTLEMEN'S AGREEMENT

In the April number of the Journal, mention was made of the fact that a considerable number of physicians who are not licensed in Kansas are permitted to practice here by a sort of courtesy arrangement. Physicians licensed in Missouri, Oklahoma, Colorado and Ne-

braska, living near the Kansas border are not required to register in this State. Presumably those registered in Kansas and similarly located are permitted to practice in adjoining states without registration. However, there is some difference of opinion as to this presumption.

In January there were thirteen death reports received at the office of the State Board of Health that were signed by non-resident, non-registered practitioners. In this one month the records show that ten unlicensed physicians were practicing in the eight counties from which reports were sent.

The medical practice act does not exempt physicians licensed in other states who are practicing in this state. The law states: "This act shall not apply . . . to any physician or surgeon who is called from another state or territory in consultation with a licensed physician of this state, or to treat a particular case in conjunction with a licensed practitioner of this state, and who does not otherwise practice in this state." The men we refer to do "otherwise practice in this state" and are not exempt.

We understand there is a "gentlemen's agreement" with the boards of examiners in this and adjoining states by which registered practitioners in these states are permitted to practice across the line. No definite limitation of distance beyond the line seems to have been made. One who is licensed in Missouri and has an office in Kansas City may visit patients in Lawrence and Topeka without molestation. One who is registered in Nebraska with an office in Lincoln, if he cares to travel by air, might make regular visits to patients in Wichita also without molestation. By whom and on what basis is it determined who and who are not entitled to



the privileges of this "gentleman's agreement?"

A physician or surgeon from Missouri or Colorado who practices in this state without being licensed to do so violates our medical practice act just as much as any other person who practices without a license. No one has recently been prosecuted for practicing without a license, but someone may be prosecuted, someone with a retaliatory disposition, and he may bring complaints against all these men from adjoining states that have been practicing here. This "gentleman's agreement" wouldn't be much of a defense in court.

But there is another provision in our medical practice act that deserves the thoughtful consideration of all of those practicing under the "gentleman's agreement." It reads: "Any person who shall practice medicine and surgery in the state of Kansas without having received and had recorded a certificate under the provisions of this act, or any person violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall pay a fine of not less than fifty dollars nor more than two hundred dollars for each offense; *and in no case wherein this act shall have been violated shall any person so violating receive compensation for services rendered.*" (Italics ours.)

It may also be suggested that it is improbable that an indemnity company would defend a policy holder for a malpractice committed in a state where he is not licensed to practice.

The beneficiaries of this "gentleman's agreement" have apparently been "sitting pretty," but in a precarious situation that is exposed to attack from numerous directions.

#### SPECIFIC RULES OF ETHICS

Under present conditions it is extremely difficult if not quite impossible to adopt specific rules of ethics that will apply to every situation. The application of the basic principles of ethics to an individual case involves careful consideration of all the relationships that exist. It is in these relationships that a number of otherwise similar cases may differ very materially.

The Judicial Council of the American Medical Association has ventured to make some decisions that seem likely to create other problems quite as difficult to solve as those in which the decisions were made. The following is quoted from the report as it was recently published.

"It has been brought to the attention of the Judicial Council that some hospitals have adopted rules whereby attending staff physicians are prohibited, under certain conditions, from accepting fees for professional services, though charges for such services are made and fees are collected and appropriated to their own use by these hospitals. In one instance members of the hospital staff were prohibited from collection of fees for services rendered to certain ward patients, who were required to pay for hospital accommodations and to pay for service rendered by members of its staff, the hospital retaining all money collected for its own use. Inquiries received indicate a tendency on the part of some hospitals to adopt rules providing for the collection of all fees by hospital officials and payment by them to attending physicians for their professional services to patients. The Judicial Council, on request, in one case gave its opinion to the effect that such procedure on the part of a hospital is unethical."

The ethical problem in cases of this kind resolves itself into a question of fairness—fairness to the hospital, fairness to the patient and fairness to the physician—and involves a consideration of relationships. The decision makes the hospital unethical in this first case and, no doubt, the evidence justifies such a decision, but one can imagine conditions which would justify the hospital in making such rules. Ward patients in most hospitals are cared for at rates much below the average cost, even when the regular ward rates are charged, but many of them are charity patients to

whom no charge is made. The inmates of most hospitals are the private patients of members of the staff. Some members of the staff may have many ward patients and very few patients in private rooms. Some of them collect the same fees for attendance on ward patients as on patients in private rooms. This is not an uncommon practice and yet it is, or it might be considered, unfair to the hospital. The hospital might feel that if the patient is able to pay the doctor his regular fee, he should not expect the hospital fees to be less than cost. There are conditions under which it would seem the hospital would be justified in regarding all patients admitted to wards as hospital patients and collecting a small fee for medical attendance, a fee commensurate with the ward rates and the patients' ability to pay. This would help to make up for the loss occasioned by charity patients.

It is generally conceded that it is unethical for a hospital to collect fees for the attending physicians, and it is also generally conceded that the hospital is under no circumstances to concern itself with the size of the fees the members of its staff may charge. Nevertheless the reputations of a good many excellent hospitals have suffered on account of the exorbitant fees sometimes charged by members of its staff—fees which could not be justified by the gravity of the case or the eminence of the attending physician or surgeon. There may be times and places when a hospital in fairness to itself and its inmates may be justified in fixing a schedule of fees and providing for their collection. The collection of the attending physician's fee by the hospital is not in itself unethical, but it is so regarded because it subjects the hospital to the suspicion that it is paying or receiving a commission.

Certainly one would not brand as unethical, because they collect the fees, those special and privately owned hospitals, nor those owned and controlled by groups in which some members of the staff participate in the general income and others are employed on a fixed salary, nor to those hospitals, of which there is a considerable number, which include medical attendance in the service for which the charge is made.

In another section of the report will be found the following:

"In reports previously submitted to the House of Delegates, the Council has referred to organizations controlled by groups of laymen, or by individuals, offering medical and hospital service to any who will buy "membership" and pay a nominal sum each month as "dues." Such schemes have been put into operation in various places and have failed within a few weeks or months because of inadequate income or because of failure to render good service. The Judicial Council has regarded these schemes as being economically unsound, unethical and inimical to the public interest."

Although all such schemes are plainly covered by section 2 of Article VI of the Principles of Ethics it seems required that the Judicial Council should pass on the ethics of individual cases. General application of this section would affect a very large part of the membership of the organizations. How does a hospital association "controlled by groups of laymen, or by individuals" differ from those controlled by large groups of laymen or by corporations? Railroad hospital associations are usually controlled by corporations and supported by dues from member employees.

These and practically all industrial hospital associations fall under the prohibitions of section 2. These are not, however, regarded as economically unsound nor inimical to the public interest—nor unethical. That is they are not economically unsound or inimical to the public interest when regarded from the viewpoint of the corporations or their employees, but from the viewpoint of the medical profession they are both.



But some of these hospital associations have expended large sums of money for buildings, grounds and equipment and any interference with their operation would be regarded as an economic calamity by the communities in which they are situated.

It would be interesting to know on what standards the ethics of these associations is to be determined, for the time has long past when the interests of the medical profession, or that part of the medical profession not connected in any way with some of these hospital associations, can have much weight in the hearing. If their ethics is to be determined on the adequacy of the accommodations and equipment, the efficiency of the service or the financial responsibility of the organization, then the ethics of some regular hospitals might be questioned.

One can imagine that considerable courage was required for the Judicial Council to make the decisions it has offered in view of the fact that arbitrary rules are inconsistent with the basic principles upon which our ethics is founded.

### DEATHS

Charles H. Bacon, Hutchinson, aged 73, died in January. He graduated from the Medical College of Indiana at Indianapolis in 1883.

Orman E. Smith, Leoti, aged 60, died March 9, as the result of a head injury received in an automobile accident two years ago. He graduated from American Medical College, St. Louis, 1901. He was a member of the Society.

Edwin Theodore Metcalf, Colony, aged 87, died November 27 of cerebral hemorrhage. He was licensed in Kansas in 1901.

William T. Tilly, Ottawa, aged 66, died March 10 of heart disease and nephritis. He graduated from the Louis-

ville Medical College, Louisville, Ky., in 1894.

Russell A. Roberts, Lenexa, aged 73, died in March of pulmonary tuberculosis. He graduated from Indiana Medical College, Indianapolis, in 1887.

J. Ada St. John, Wichita, aged 83, died March 16 as the result of a fractured hip received a year ago. Graduated from the University of Michigan Medical School, Ann Arbor, in 1881.

Louis Henry DeMarr, Olivet, aged 82, died February 16 of pneumonia. He graduated from Iowa Eclectic Medical College, Des Moines, in 1893.

David H. Fitzgerald, Kelly, aged 78, died May 7. He graduated from Keokuk Medical College, Keokuk, Iowa, in 1881. He had been a member of the Society.

### Proceedings of the Seventy-Third Meeting of the Kansas Medical Society, Held at Manhattan, Wareham Hotel, Tuesday, Wednesday and Thursday, May 5th, 6th and 7th, 1931.

#### MEETING OF THE HOUSE OF DELEGATES

The House of Delegates met in the Ball Room of the Wareham Hotel May 5 at 8:20 p. m. The meeting was called to order by the president, Dr. E. C. Duncan. On motion by Dr. O. P. Davis, regularly seconded and carried, the minutes of the 1930 meeting were not read, having previously been published in the Journal.

#### SECRETARY'S REPORT

To the House of Delegates of the Kansas Medical Society the following report is respectfully submitted:

#### Financial Report

Balance on hand May 1, 1930:		
Medical Defense .....	\$8,653.41	
General Fund .....	7,702.66	\$16,356.07
Cash received from all sources for the year ending May 1, 1931:		
Dues from members .....	\$11,074.00	
Check from Editor .....	578.10	
Interest reported by Treasurer..	258.75	\$11,910.85
		\$28,266.92
Expended for the year ending May 1, 1931:		
Medical Defense .....	\$1,759.86	
General Fund .....	8,563.97	
Total expenditures .....		\$10,323.83
Balance on hand May 1, 1931.....		\$17,943.09

## Standing of Funds May 1, 1931:

Medical Defense .....	\$10,057.55
General Fund .....	7,885.54
	<u>\$17,943.09</u>

For fourteen years we have been bringing you these reports of the Kansas Medical Society. But we feel that this last year, in point of accomplishment has been the most successful of any during our service to you. It has been a busy year and a hard one; but the results have more than recompensed for the time and labor spent in the interest of organized medicine. Our efforts to keep the membership of the society at the highest possible mark has not been without result. While it is impossible to report an increase in membership every year it is satisfying to report no appreciable decrease of members at any time. According to our records 1,526 was the largest membership ever attained in the Kansas Medical Society and 1,504 was the lowest; a difference of only 22 members.

At the present time we have 1,385 paid up membership as against 1,381 of last year at this time. The dues were raised from \$5.00 to \$7.00 in 1930; but that has had no serious effect on the membership as it numbered but five less on December 31, 1930, than that of December 31, 1929, at which time it was 1,518. We feel reasonably sure from past experience that the membership on December 31, 1931, will reach that of previous years as the dues straggle in during the entire year. Although the Constitution and By-laws read that the dues shall be paid by February 1 each year.

In the past year we have lost 19 members by death and 26 by their removal to other states, making a total loss of 45 members. We have 41 new members enrolled for the same period of time. Thirty-five have changed locations in the state and at present we have 121 delinquents according to our records.

The local secretaries have co-operated with us in a whole hearted manner in the contribution of material for the program which I believe is the best ever and of which I am sure you will render the same judgment. So generous were the responses to our S.O.S. that we had 12 papers more than we could possibly use. We were certainly sorry that limitation

of time and space on the program prohibited their use. We assuredly do appreciate the co-operation of the secretaries and the contributions of the members for the success of the program and we tender to both our heartiest thanks.

To our president, Dr. Duncan, we cannot adequately express our appreciation for his ever ready help and counsel. He has been a willing worker, on the job all of the time. His address this morning will readily convince you that we speak advisedly. I thank him most sincerely for his help.

To our honored guests who have contributed so generously to the excellency of the program which has been for our pleasure and profit, I extend my thanks and those of the Kansas Medical Society at large.

Respectfully submitted,

(Signed) J. F. HASSIG, Secretary.

Dr. J. F. Gsell made a motion that the report be accepted and filed, which was regularly seconded and carried.

## TREASURER'S REPORT

To the House of Delegates of the Kansas Medical Society.

Gentlemen:

As Treasurer I herewith submit report showing standing of funds in my hands as Treasurer:

Standing of funds May 1, 1930:	
Medical Defense .....	\$8,653.41
General Fund .....	7,702.66
	<u>\$16,356.07</u>

Cash received from:	
Secretary .....	\$11,652.10
Interest on Liberty bonds .....	258.75
	<u>\$11,910.85</u>
	<u>\$28,266.92</u>

Expended for year ending May 1, 1931:	
Medical Defense .....	\$1,759.86
General Fund .....	8,563.97
	<u>\$10,323.83</u>
	<u>\$17,943.09</u>

Standing of funds May 1, 1931:	
Medical Defense .....	\$10,057.55
General Fund .....	7,885.54
	<u>\$17,943.09</u>

The expenditures in the Defense Fund were \$210.32 greater than in 1930. Expenditures in general fund were \$2,477.99 more than in 1930. A list of the vouchers is herewith attached, showing expenditures in both funds.

## DEFENSE FUND

Date	No. of Voucher	To Whom Drawn	Amt.
May 12, 1930	137	O. P. Davis .....	\$ 75.00
May 12, 1930	138	J. D. M. Hamilton .....	88.15



June 18, 1930	139	J. D. M. Hamilton .....	168.37
July 21, 1930	140	American Med. Assoc..	7.00
July 31, 1930	141	J. D. M. Hamilton .....	177.00
July 31, 1930	142	O. P. Davis .....	80.00
Sept. 18, 1930	143	J. D. M. Hamilton .....	75.00
Nov. 4, 1930	144	J. D. M. Hamilton .....	153.00
Nov. 4, 1930	145	O. P. Davis .....	75.00
Jan. 14, 1931	146	J. D. M. Hamilton .....	318.00
Jan. 30, 1931	147	O. P. Davis .....	75.00
Feb. 18, 1931	148	J. D. M. Hamilton .....	150.71
Mar. 13, 1931	149	J. D. M. Hamilton .....	115.00
Apr. 10, 1931	150	J. D. M. Hamilton .....	201.82

## GENERAL FUND

Date	No. of Voucher	To Whom Drawn	Amt.
May 2, 1930	266	R. M. Darnell .....	\$ 38.92
May 8, 1930	267	Hotel Jayhawk .....	40.77
May 8, 1930	268	Mrs. Bess Comiskey..	10.00
May 12, 1930	269	Joseph Colt Bloodgood	162.65
May 12, 1930	270	Elmer E. Liggett .....	9.98
May 12, 1930	271	W. E. McVey .....	2,000.00
May 12, 1930	272	J. F. Hassig .....	1,396.79
May 14, 1930	273	Allen B. Kanavel .....	49.10
June 5, 1930	274	Walter E. Danby .....	135.42
June 5, 1930	275	Donald Campbell .....	75.00
July 1, 1930	276	Donald Campbell .....	200.00
Aug. 5, 1930	277	L. F. Barney .....	65.00
Aug. 5, 1930	278	Donald Campbell .....	701.13
Aug. 10, 1930	279	Donald Campbell .....	18.15
Aug. 14, 1930	280	E. S. Edgerton .....	340.95
Aug. 14, 1930	281	W. E. McVey .....	500.00
Sept. 18, 1930	282	Joseph A. Lynch .....	10.00
Oct. 3, 1930	283	Donald Campbell .....	93.60
Nov. 12, 1930	284	W. E. McVey .....	500.00
Jan. 2, 1931	285	Dana C. Brown .....	4.00
Jan. 22, 1931	286	A. L. Burger .....	500.00
Jan. 22, 1931	287	J. F. Hassig .....	744.39
Jan. 22, 1931	288	E. C. Duncan .....	14.00
Jan. 22, 1931	289	E. S. Edgerton .....	22.82
Jan. 22, 1931	290	W. S. Lindsay .....	8.00
Jan. 22, 1931	291	P. S. Mitchell .....	16.46
Jan. 22, 1931	292	J. F. Gsell .....	28.33
Jan. 22, 1931	293	C. C. Stillman .....	11.25
Jan. 22, 1931	294	Alfred O'Donnell .....	11.50
Jan. 22, 1931	295	H. O. Hardesty .....	34.50
Jan. 22, 1931	296	C. H. Ewing .....	34.70
Jan. 22, 1931	297	W. F. Fee .....	45.00
Jan. 28, 1931	298	J. T. Axtell .....	25.86
Jan. 30, 1931	299	O. P. Davis .....	9.15
Feb. 3, 1931	300	The Evans Press .....	6.00
Feb. 5, 1931	301	American Med. Assoc.	10.75
Mar. 3, 1931	302	W. E. McVey .....	500.00
Mar. 4, 1931	303	Bauer Printing Co. ..	56.99
Mar. 6, 1931	304	Kansas Bankers Assoc.	7.50
Apr. 10, 1931	305	St. Louis Button Co..	21.31
Apr. 23, 1931	306	The Evans Press .....	104.00

Your Society has certain fixed expense for the year, which is divided as follows: Expenses of guests for 1930 meeting \$347.17, salary of Editor \$2,000, salary of Secretary \$1,000 and expenses of Secretary from January 20 to May 1 \$396, hotel expenses for guests and county secretaries luncheon \$40.77, extra clerk \$10.00, expenses of J. F. Hassig, Secretary, from May to January \$744.39, Dr. Liggett \$9.98, mid-winter meeting of the Councillors \$261.57; programs, buttons, etc. \$189.80, and \$2,000 expenses of Bureau of Public Relations, making a grand total of \$6,999.68. Deducted from

this amount is \$578.10 received from the Editor making a total fixed expense of \$6,421.58, which must be borne by the general fund with other incidental expenses not here mentioned.

Your Defense Fund is in a healthy condition with income in excess of expenditures each year. The past year shows income of \$3,164.00 and expenditures of \$1,759.86 leaving a net balance in the defense fund for the year of \$1,404.14 and a total of \$10,057.55 in the defense fund today, \$6,000 of which is invested in liberty bonds.

Your General Fund is always in the red during the later months of each fiscal year. The income being less than the expenditures in this fund. On May 1, 1930, we had on hand \$7,702.66; you expended for the year \$8,563.97, your expenditures being \$861.31 in excess of the amount on hand in the general fund. You start this year with \$7,885.54 in the General Fund with fixed expenditures for this meeting at \$5,993.72. This is figuring \$2,000 appropriated for the Bureau of Public Relations Committee; leaving a balance of \$1,891.82, which must take care of all other expenses including the mid-winter meeting of the Council and Secretary's expense account amounting to about \$1,005.96 leaving \$885.86 to take care of all other expenses.

You can readily understand unless rigid economy is maintained for the coming year, the general fund will be in the red to a greater amount in the coming year than in the preceeding year. Our dues are paid to the Secretary generally in the first quarter of the year. And this deficit in the general fund is taken care of out of the money properly belonging to the coming year, making the amount on hand in the general fund May 1 each year less than it would have been had the expense been held down to the income in that fund.

Respectfully submitted,  
(Signed) GEO. M. GRAY, Treas.

Dr. C. C. Stillman made a motion that the report be accepted and filed, which was regularly seconded and carried.

Dr. O. P. Davis made a motion that the reading of the Councillor reports be

dispensed with, and that the Councillors hand their reports to the Secretary to be incorporated in the minutes for publication in the Journal.

#### COUNCILLORS' REPORTS

*First District:* Owing to the illness of Dr. L. W. Shannon, Councillor, no report was made.

*Second District:* To the House of Delegates—I beg to submit the following report of the second district: The second district has had a very successful year. Wyandotte County Secretary is publishing a bi-monthly bulletin with each program, an editorial and the activities of the members. Wyandotte County has spent a great deal of money for advertising in our daily newspaper, which I believe the only type of advertising suitable to the Medical Profession and educational to the public.

Johnson County has a very active society at present. Leavenworth County has had a very successful year. All of the counties where county societies are active are very progressive.

Respectfully submitted,

(Signed) LAVERNE SPAKE.

*Third District:* To the House of Delegates—I beg to submit the following report from the Third Councillor's District of the Kansas Medical Society. All counties except Chautauqua are well organized and functioning. I visited Crawford and Bourbon individually and the other counties in joint meetings and found no complaints.

I find joint meetings are a great success.

Respectfully submitted,

(Signed) P. S. MITCHELL.

*Fourth District:* To the House of Delegates—This district is composed of seven counties, as follows: Shawnee, Wabaunsee, Geary, Osage, Morris, Lyon and Chase. There are, however, only two societies in the district, viz., Shawnee and Lyon. These two societies are more than county societies, inasmuch as they are made up in part of members from several counties adjacent to the two counties, lending their names to the two organizations. Thus, both societies are greatly strengthened by members from counties where otherwise small and

ineffective organizations, if any at all, would lead a precarious existence.

The Lyon County Society has a paid up membership of 43, which is the same as in last report. These members are derived as follows: Lyon, 31; Greenwood, 7; Chase, 4; Osage, 1. The society has neither gained nor lost any members during the year, according to the Secretary, Dr. C. E. Partridge, eleven regular and one special meetings have been held, as well as one social meeting. There has been four guest speakers during the year, and the average attendance at the meetings was 28. This is a good showing for this well known and wide-awake society.

The Shawnee County Society is composed as follows by counties: Shawnee, 117; Jefferson, 7; Osage, 6; Wabaunsee, 5; Jackson, 1, Pottawatomie, 1; total, 137. Eight new members were added during the year, and eight were lost; one (emeritus) by death, and seven by transfer, removal or suspension. Nine regular meetings were held and one social meeting or picnic. The Society holds no meeting during the three hot months. The average attendance at the meetings was 56.4. There were five guest speakers during the year. Several of the meetings were wholly clinical, being held at each of the hospitals. These meetings were especially enjoyed by the members and well attended. This society is always manned by efficient officers who take great pains to provide good programs and to keep alive the pride and interest of the membership.

Geary County, which belongs in this district, has no society of its own but the profession of the county derive their membership through affiliation with the neighboring county societies.

Respectfully submitted,

(Signed) O. P. DAVIS,

*Fifth District:* To the House of Delegates—During the past year I visited almost all of the county medical societies in my district and enjoyed some very fine programs at these meetings. I gave a talk to the members at several of the meetings, and am glad to report that



the attendance and interest in the different societies is very satisfactory.

Fraternally yours,

(Signed) J. T. AXTELL.

*Sixth District:* To the House of Delegates—There are four active societies in this district, Sedgwick, Sumner, Butler and Cowley counties have regular meetings. Sumner has been holding quarterly meetings. In March we had the pleasure of meeting with them. At this time, the society agreed unanimously to change to monthly meetings. Sedgwick has been having good meetings all year. The Public Relations Committee has been active and have at this time under consideration, a plan for a full time secretary for the county; also an outline for better milk and meat inspection. Have recently put a fifteen minute radio program on the air three times a week over station KFH. One outstanding meeting was given over entirely honoring Dr. D. W. Basham on completing his fifty years of practice. This was well attended by physicians from the surrounding country. Cowley County held a similar meeting in April, honoring three of its members who had completed fifty years of practice. This was also a large meeting and enjoyed by everyone. We feel that meetings of this sort are worth while and will promote better feeling and fellowship among the profession. Fifty years of honorable service rendered by any doctor to his community is worth special recognition. We have had no quarrels to settle and I believe the profession of this district is ready and willing to help the State Society in any constructive program they may undertake.

Respectfully submitted,

(Signed) J. F. GSELL.

*Seventh District:* To the House of Delegates—Mitchell County through their Secretary, Dr. Martha Madtson of Beloit, reports a very satisfactory year so far as their county society is concerned. Regular and well attended meetings. Dr. Hope is their Delegate to the state meeting.

Cloud County through their Secretary, Dr. R. E. Weaver of Concordia, reports that they have not had any county so-

ciety meeting lately. Their Delegate is, their, as well as our, long time faithful standby, Dr. W. F. Sawhill.

Clay County has had uniformly good meetings, their Secretary, Dr. F. R. Croson of Clay Center, reports. Possibly not quite so well attended as the quality and outstanding character of their programs would and should warrant. Reason for this might seem to be too long continuance in office of some of present personnel. This will be corrected. Dr. E. C. Morgan is the Clay County Delegate.

Republic County through their Secretary, Dr. H. E. Robbins of Belleville, reports regular meetings which have been well attended. Their Delegate is Dr. M. D. McComas of Courtland.

Washington County reported some time back through their President, Dr. H. D. Smith, they might do something toward a more active organization or else take steps to join with some other county, presumably Clay, in order to have meetings. Thus far no such steps have been taken. No reports have been received from the other counties in the District, except that Rooks County belongs to the Central Kansas Medical Society and attend their meetings. Dr. Miller of Plainville reports this. Also that the members of Osborne County Medical Society meet with Solomon Valley. We understand, however, that many of the Jewell County men go to Mitchell County meetings.

Respectfully submitted,

(Signed) C. C. STILLMAN.

*Eighth District:* To the President and House of Delegates—I beg to submit the following report from the Eighth District comprised of the counties: Saline, Ellsworth, Ottawa, Dickinson, Lincoln.

Saline County Medical Society—Number of members, 31; physicians in county, 37; physicians in county eligible but not members, 2; meetings held monthly.

Ellsworth County Medical Society—Number of members, 8; physicians in county, 8; physicians in county eligible but not members, 0; meetings held quarterly, Central Kansas Medical Society.

Ottawa County Medical Society—

Number of members, 10; physicians in county, 9; physicians in county eligible but not members, 0; meetings held monthly.

Dickinson County Medical Society—Number of members, 19; physicians in county, 26; physicians in county eligible but not members, 7; meetings held monthly.

Lincoln County Medical Society—Number of members belonging to some society, 6; physicians in county, 7; physicians in county eligible but not members, 1; meetings held quarterly.

(Signed) ALFRED O'DONNELL.

*Ninth District:* To the House of Delegates—We have two active medical societies in this District. They are the Norton-Decatur Medical Society and the Smith County Medical Society. While it has not been the pleasure of the writer to visit the Smith County Society he has been informed that they have a good membership and good attendance at their meetings. The Norton-Decatur Medical Society has a good active membership. Good programs are maintained at the meetings and a good fellowship is prevalent amongst all members.

Respectfully submitted,

(Signed) H. O. HARDESTY.

*Tenth District:* To the House of Delegates—This District has eight counties and one active medical society, the Central Kansas Medical Society. The membership of this Society is not confined to the physicians of the eight counties. The meetings of the society are held quarterly and are alternated between Hays and Ellsworth with an occasional meeting at Russell. The Society is very active and wide awake. From one to three guest speakers appear on the program and papers by local members. Free and open discussion of all papers is indulged in by the members. The hospitals at Hays and Ellsworth furnish interesting clinical material. The physicians and their wives of the local community where meetings are held extend a very cordial welcome to visiting doctors and there is a general feeling of good fellowship.

This year there has been no complaints brought to my attention of unethical conduct by the members of the so-

ciety. I understand one instance occurred but the matter was very diplomatically handled by the local men. There are a few doctors in the District who are not members of the society and I regret to say they are the younger men mostly. This is to be deplored. The intensive, extensive, and fine training given our medical students today should not be hid under a bushel. These young men have something to give the profession and the public, and the medical society has much to give to them.

To the doctors of the District I would say that while primarily we are most concerned with the prevention and cure of disease, we must not be unmindful of community welfare. The cost of medical services has been quite prominently in the limelight. The products of farming communities are at the lowest level they have been in 30 years. A bushel of wheat, corn, a dozen of eggs or a pound of butter doesn't pay for much now. In some communities the physicians are voluntarily reducing their fees some. In order to do their bit toward equalizing and stabilizing conditions. Whether this is wise or not I leave to you. I merely drop the suggestion. One thing is sure we cannot lower the quality of our service, a physician must always give his best; otherwise he is unworthy of the sacred traditions of the profession.

While collections are difficult there is but little real hardship among the members of this district. Improvement in equipment in order to better service has been noted in places; and is to be commended. In general the conditions of the Tenth District are very satisfactory.

Respectfully submitted,

(Signed) IVAN B. PARKER

*Eleventh District:* To the House of Delegates—The report of the Eleventh District of the Kansas Medical Society is of necessity brief because of the few societies existing in the district, there being only three: Rush-Ness, Pawnee and Barton. The Rush-Ness and Pawnee meet only occasionally. Barton being the only real active society. Excluding Pawnee and Edwards, Barton County has more doctors than all the other counties of the district combined.



Barton County also has a unique method of obtaining funds for their society's support. It has been the custom for several years for one member of the society to be chosen by the county commissioners as county health officer, who also acts as county physician and the salary for both offices is turned into the fund of the County Society. This official duty is passed along among members each year to avoid a hardship on any one man and this official is assisted in his duties of county physician by all members of the society. But it is required by law that one member act as county health officer. This plan seems to work out nicely there; but perhaps would not be so good in either a smaller or larger county.

At the meeting of the Barton County Medical Society on the evening of May 1, Drs. Stookey and Hertzler of Kansas City gave addresses and a wonderful banquet was provided by the Sisters of St. Rose Hospital. About sixty doctors were present, invitations having been sent out to doctors from surrounding counties. Doctors are aware of these meetings and Great Bend always has a crowd on these occasions.

Respectfully submitted,

(Signed) Dr. C. H. EWING.

*Twelfth District:* To the House of Delegates—Very little can be said in this report outside of other years; as everything is moving along about as usual. All the doctors in the Twelfth District are working hard to make ends meet; but all are in accord.

In the last year I have visited the Meade Seward Society, also the Ford County Medical Society. Most of the doctors who are eligible have aligned themselves with these societies, which are tributary to them.

Have not been able to attend the Finney County Society this year as I could not find out when they met; but will endeavor to do so during the next year, as well as some outlying districts, which have no society formed as yet.

Respectfully submitted,

(Signed) Wm. F. FEE.

#### REPORT OF MEDICAL DEFENSE BOARD

To the House of Delegates:

The Medical Defense Board respectfully submits the report of its work during the past year. The report of its attorney is also submitted and is to be considered a part of the Board's report. This legal report gives a list of all cases now in hand, with their present status; also, such detailed information concerning the cases actually in litigation that it will not be necessary to repeat this information in this part of our report. It will be sufficient to say, in this connection, that there are now seventeen cases in course of litigation, which is the same number we had at this time last year. Of this number only three are new cases, filed since last report. In addition to these new cases there have been quite a number of threatened or abortive cases. We feel that it should be placed to the credit of our system that there have been so few cases that have actually been filed. That has been our real purpose all along. A vigorous defense when suit is brought and a stubborn refusal to compromise or settle, together with the difficulty in finding medical support for the prospective plaintiff, have greatly deterred the tendency to sue our members once so prevalent.

As will be seen in the attorney's report, there have been five cases tried before the lower courts and one heard on appeal to the Supreme Court. Of these six cases, we have won five of them and lost one, the latter due to the fact that the allegations in the complaint were admitted by the defendant.

The Defense Board is proud of its record during the years of its existence. It is devoted to the original purpose of lessening if not entirely stamping out the tendency, once so prevalent and alarming, to answer the ruinous accusation of malpractice. We have found that our assistance is very welcome and duly appreciated wherever it has been used. Even the indemnity insurance companies are very glad to have our co-operation on account of the influence such support exercises on the medical witness, without which witness there would be no case to start with.

We desire to again express our appreciation of the able services of our attorney, Hon. John Hamilton. He has continued to give our interests his efficient personal attention and has won the esteem and friendship of our members wherever he has gone in the defense of any one of them. His success is also very stimulating and encouraging.

A table of our expenditures, during the past seventeen years, is subjoined, which may be found of interest. It will be seen that the expenses of the past year have been \$1,759.86 (Vouchers Nos. 137 to 150, inclusive). This is \$210.32 more than the expenses of last year, but with that exception, lower than any previous year since 1924. A detailed report of expenditures will be found in the report of the Treasurer.

#### DEFENSE BOARD EXPENDITURES—17 YEARS

1915 .....	\$ 1,254.95
1916 .....	1,189.27
1917 .....	777.45
1918 .....	809.58
1919 .....	759.41
1920 .....	1,245.51
1921 .....	1,458.35
1922 .....	1,236.08
1923 .....	1,310.96
1924 .....	1,479.76
1925 .....	1,970.05
1926 .....	2,008.13
1927 .....	1,981.03
1928 .....	1,949.02
1929 .....	2,297.43
1930 .....	1,549.54
1931 .....	1,759.86
Total, 17 years .....	\$25,036.38
Average, per year .....	1,472.73

Respectfully submitted,

(Signed) O. P. DAVIS, Chairman.

C. C. STILLMAN.

WM. F. FEE.

Dr. Geo. M. Gray made a motion that the report be accepted and filed, which was regularly seconded and carried.

#### REPORT OF ATTORNEY MEDICAL DEFENSE

##### BOARD

The following report of Mr. J. D. M. Hamilton, Attorney, Medical Defense Board, was handed to the Secretary by Dr. O. P. Davis for publication in the minutes.

April 25, 1931.

Dr. O. P. Davis, Chairman,  
Medical Defense Board,  
Kansas State Medical Society,  
Topeka, Kansas.

My dear Dr. Davis:

I am, herewith, enclosing for consid-

eration of the Medical Defense Board and the Society generally a summary of cases which have passed through my hands as attorney for the Medical Defense Board during the period from April 1, 1930, to April 1, 1931.

During the present time seventeen (17) cases are carried on the report, which is the same number as carried on the report for April 1, 1930. Of the cases reported at this time only three have been filed since the preceding report.

An analysis of the report shows a surprising number of increases in the miscellaneous types of cases as compared with bone cases which have heretofore usually been predominant.

During the course of the year five (5) cases have actually been tried to the court and one heard upon appeal to the Supreme Court of this state; of the six (6) cases thus presented five (5) have terminated favorably to the defendants, the one case resulting in a verdict for the plaintiff, having been brought for an unauthorized autopsy which was admitted on the part of the defendants. It is to be noticed that eight (8) cases are now ready for trial and possibly one or two of these should have been disposed of during the preceding year, however, I have not thought it well to press the trial of cases at this particular time because of the peculiar situation which became evident at the last general election.

The report is respectfully submitted, and I trust that it will have the approval, not only of the Board but of the State Society generally.

Respectfully yours,

O'NEIL & HAMILTON.

By (Signed) J. D. M. HAMILTON.

#### SUMMARY OF CASES MEDICAL DEFENSE BOARD

April 1, 1930 to April 1, 1931.

1. Strode v. M. T. McKay. Improper treatment of osteomyelitis of tibia. Filed 2/11/26. First trial, hung jury. Second trial, verdict for defendant set aside for misconduct of juror. Third trial, hung jury. Settled by insurance carrier.

2. Smith v. R. C. Harner. Failure to properly diagnose and treat Colles' fracture. Filed 3/31/27. At issue.



3. Hughes v. F. W. Tretbar. Negligent failure to attend patient. Filed 6/26/28. Has been pending upon plaintiff's motion for new trial for more than 2 years. Will be dropped from these reports unless further action is taken by plaintiff.

4. A. R. Nash (Dr.) v. Mangan. Cross petition for negligent failure to properly diagnose infection of jaw bone. Filed 6/30/28. At issue.

5. Smith v. Mayo Hedge. Failure to properly treat during pregnancy. Filed 6/28/29. At issue.

6. Mickens v. J. B. Davis and F. A. Trump. Action for libel growing out of medical report made in court. Filed 7/10/29. Judgment for defendant upon demurrer affirmed by Supreme Court.

7. Brooks v. E. H. Clayton and E. F. Day. Negligence in operating for kidney stones. Filed 7/13/29. Tried to jury. Verdict for defendants.

8. Sedlock v. J. H. Buckles. Failure to use care resulting in blood infection. Filed 7/29/29. At issue.

9. Porterfield v. C. H. Fortner, F. W. Shelton, W. J. Aldrich and Missouri Pacific Ry. Co. Damages on account of unauthorized autopsy. Filed 8/21/29. Tried to jury. Verdict for plaintiff \$1,000. Paid by four defendants upon pro rata basis.

10. Helton v. H. C. Markham. Failure to properly treat rabies. Filed 10/6/29. Pending on preliminary motions.

11. Kaler v. C. B. Van Horn. Negligent use of x-ray resulting in third degree burn. Filed 1/17/30. Demurrer to plaintiff's case sustained upon trial and judgment entered for defendant.

12. Mick v. L. W. Fowler and J. D. Musick. Failure to diagnose and treat fractures of tibia and fibula. Filed 2/7/30. At issue.

13. Cooke v. J. C. Bunten. Failure to diagnose and treat fracture of left arm. Filed 2/21/30. At issue.

14. Keatley v. G. L. Kerley. Negligence in treating fractures of tibia and fibula. Filed 1/6/30. Tried to jury. Verdict for defendant.

15. Murthe v. C. D. Armstrong, C. M. Fitzpatrick, H. V. Soliss and Nazareth Convent and Academy. Negligent failure to protect plaintiff during course of

operation in which she received burns on her feet. Filed 6/2/30. At issue.

16. Liebsch v. B. E. Miller and C. C. Kerr. Negligent removal of portion of uvula during tonsillectomy. Filed 10/10/30. At issue.

17. Pearl Sykes v. C. D. Blake, C. M. Miller and Hayes Protestant Hospital. For negligence in failing to remove sponge during operation for sarcoma. Filed 1/21/31. Pending upon preliminary motions.

Dr. E. C. Duncan, Chairman of the Executive Committee of Council made no report, as there had been no meeting of the committee during the year.

#### REPORT OF BUREAU OF PUBLIC RELATIONS

The activities of the bureau have been considerably retarded during the past year by a series of events which could not be predicted at the last annual meeting.

The legislative committee and the Council found little encouragement in the political situation to launch a campaign for any kind of legislation during the last session. In fact it was the consensus of opinion that we would probably fare better if we quietly concealed our discontent, submerged our ambitions and let the politicians rock their own boat. The committee was sufficiently awake, however, to see that the only bill which might have been harmful was quietly killed.

At the last annual meeting we had some plans for a more thorough enforcement of the medical practice act and the suggestions then made were heartily approved. We were at that particular time just entering upon our grand experiment in law enforcement, even then destined to precipitate the greatest political debacle in the history of Kansas. While the peace and quiet of this fair land was lost in a turbulent flood of dissension it was no time to suggest the prosecution of insignificant violators of law as those contemplated in our program. Even yet the legal atmosphere is too unsettled to justify our venturing very far along that road.

When the matter was under discussion at the last meeting we had secured a list of several practitioners who were

not licensed and a considerable number who had not recorded their licenses. Since that time we have been supplied with a list of practitioners located in adjoining states that are practicing in Kansas without being licensed to do so. Any attempt to enforce the medical practice act in other sections of the state will of course be complicated by this custom.

Since the bureau was first established we have been experimenting in publicity methods. During the first year several pamphlets were printed and mailed to as many people over the state as our funds and the extent of our mailing list permitted. A fairly large mailing list was finally secured and the state was pretty well covered, but it proved to be a very expensive kind of publicity. Arrangements were then made for regular contributions to county newspapers in the state. At the present time articles are being sent every week to eighty-four newspapers and up to this date we have sent out 227 such articles in 227 weeks. These articles are unsigned, no effort is made to teach the people how to diagnose or treat their ills, but an effort has always been made to stress the work that has been done and is being done by scientific medicine. Most all the editors objected to the length of the first articles sent out. Since then we have made them average about 250 words. It is impossible to present some of the subjects it is desirable to discuss within those limits and we must always avoid discussions that may antagonize the commercial interests of the papers that use our articles.

Other publicity methods have been studied. In several sections of the state some rather expensive advertising campaigns have been conducted but the reports received indicate that there are serious objections to that method. The problem is how we can reach and interest a large number of people in our program, and what medium we can utilize for free discussion without infringing upon its commercial interests.

The advantages offered by a popular health magazine, of moderate price, published by the Society have been recog-

nized for several years and various plans for such a publication have been discussed. The undertaking, however, has always seemed too onerous to be hopefully considered. The time seems to have arrived when something of the kind must be contemplated seriously. The proposition was presented to the bureau board at the mid-winter meeting of the Council. There was little time to discuss the plans then prepared and the matter was deferred for discussion in the House of Delegates at this meeting. The most serious difficulty in launching a magazine of this kind, or any other kind, lies in securing a circulation. It would take many months and cost a good deal to secure enough direct subscriptions to give it a good start. In order to learn if our plan would work out we sent out letters from the office of the bureau to the members of the Society, explaining briefly the plan in mind, and asking each member to pledge as many subscriptions as he would to such a magazine. So far more than 1,000 subscriptions have been pledged. This number will be more than doubled as soon as, and if, it is definitely decided to publish it.

In order that we might be able to estimate the probable cost we have secured some figures as a basis for calculation. Five thousand copies of a 16 page magazine, 8½x11½ on 60 pound paper can be printed for \$162.50. When this is entered as second class matter the postage will be \$1.80 per thousand. Besides articles on medical subjects by members of our Society, there should be a department conducted by the State Board of Health and one or two departments devoted to subjects of particular interest to the housewife.

It is needless, however, to go into further details as to the make-up of such a magazine until there has been some expression by this body as to the advisability of undertaking such a venture.

#### EXPENDITURES OF THE BUREAU OF PUBLIC RELATIONS OF KANSAS MEDICAL SOCIETY

May 1, 1930, to May 1, 1931

Salary .....	\$1,040.00
Postage .....	130.39
Stationery .....	38.95
	<hr/>
	\$1,209.34

W. E. McVey, Executive Sec'y.



Dr. Geo. M. Gray made a motion that the report be received, placed on file and open for discussion, which was regularly seconded and carried.

Dr. Davis made a motion that the House of Delegates adjourn as soon as all committee reports were read and meet again at the close of the public meeting in the Wareham Theater. Motion carried.

REPORT OF THE COMMITTEE ON PUBLIC  
HEALTH AND EDUCATION

To the House of Delegate:

Your committee in previous reports has emphasized the importance of education of the public in regard to the accomplishments and the value of scientific medicine. However, in studying the reports of communicable diseases in the State of Kansas for the year 1930, it would appear that many of our people are unaware of what may be accomplished in the prevention of disease. There were reported in 1930, 2,422 cases of smallpox, 696 cases of diphtheria and 364 cases of typhoid fever, the rates per 100,000 population being 128.7, 37.0 and 19.3 respectively.

A specific has been available for the prevention of smallpox for more than 130 years. Recent developments in the technique of vaccination with the use of the multiple pressure method, have minimized the untoward symptoms following smallpox vaccination.

More than twenty years ago, toxin antitoxin was developed and experience has demonstrated that this agent is a specific preventive in at least 75 per cent of children under ten years of age through the use of one course of three injections. Additional numbers may be immunized through the use of the second, or even the third course of three injections each.

Your committee is of the opinion that the family physician should utilize these two specific preventives before the baby, which he has delivered, reaches the age of one year. Infants may be vaccinated against smallpox preferably at the age of three months, and toxin antitoxin should be used at not to exceed six months of age. Through the use of these two preventives and in this manner,

there would ultimately be developed an immune population against these two diseases. We are of the opinion that the application of these two preventives should be made part of the service rendered by the attending obstetrician.

Your committee would call the attention of the members of this society to the fact that typhoid fever vaccine may be secured without cost, in such quantities as desired, by application to the State Board of Health.

In addition to the education in the value of preventive medicine which may be given by the physician in regard to the prevention of smallpox, diphtheria and typhoid fever, there are numerous fields which present other possibilities, including the public press, the use of the radio, bulletins and pamphlets, public meetings and the proposed publication of a magazine for lay readers under the auspices of the State Medical Society.

The number of public meetings sponsored by county medical societies is very limited and unless there is a speaker with a national reputation, the audience usually is small. Your committee, however, is of the opinion that these meetings are well worth while and component county medical societies should be encouraged to sponsor them.

The Sedgwick County Medical Society has, through the use of the radio, undertaken a three-months' program and three fourteen-minute articles will be presented each week over radio station KFH. The State Board of Health has recently been requested to prepare five-minute articles on health for use each week over radio station KFBI. The educational program by the Sedgwick County Medical Society was begun on April 15 and the first of the weekly articles over KFBI was given during the week of April 12.

We are advised by the Secretary of the Public Relations Committee, that at the present time, 85 newspapers in the state are making use of the articles prepared by Dr. McVey, Chairman of the Committee. Report in detail of this particular activity on public health education will be given by Dr. McVey. Your committee is of the opinion that serious

consideration should be given to the establishment of a magazine for lay readers under the sponsorship of the Kansas Medical Society, this proposed activity being also covered in the report of Dr. McVey.

At the 1930 meeting, the society adopted a resolution indorsing the creation of full-time health departments as the ideal unit for efficient public health protection. This committee again wishes to emphasize the importance of the development of these local units.

Your committee wishes to express its appreciation to those county medical societies and city and county boards of health who have been active in the diphtheria prevention program which was first undertaken in this state approximately ten years ago.

Respectively submitted,

(Signed) EARLE G. BROWN,  
H. E. HASKINS,  
J. T. AXTELL.

Dr. Brown moved that the report be adopted and placed on file, which was regularly seconded and carried.

#### REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

To the House of Delegates:

Your committee on Public Policy and Legislation reports as follows: At a joint meeting of this committee and the Bureau of Public Relations it was agreed that on account of lack of interest manifested by members of the legislature at previous sessions in our proposed basic science law, we would not present a bill at the recent session; but would be prepared to do what we could to prevent the enactment of objectionable laws pertaining to the practice of medicine. Only one such bill appeared, a copy of which I present.

This bill was offered in the Senate and after due consideration was reported by the Committee on Public Health with recommendation that it be passed. We feel under obligation to Lieut. Gov. Graybill, Senators Baker and Ratner, through whose efforts the bill was killed in the committee of the whole.

Respectfully submitted,

(Signed) W. S. LINDSAY.

Dr. Lindsay moved that the report be accepted and placed on file, which was regularly seconded and carried.

#### REPORT OF COMMITTEE ON SCHOOL OF MEDICINE

To the House of Delegates:

Your committee desires to make the following report:

The School of Medicine, University of Kansas, is keeping pace with the best medical schools. In the United States there are 80 medical schools, 38 of which including this school are in the class of "A plus," it recently having been granted a charter in the honorary medical fraternity, Alpha Omega Alpha.

The student enrollment has increased considerably being now a total of 257. The facilities at the Lawrence division limit the classes to 65 and at the Kansas City division to 60. There are 54 members of the graduating class which is the largest in the history of the school.

Last year approximately 400 made application for admittance to the freshman class, 115 being from Kansas. Sixty-four were accepted from Kansas, seven from Kansas City, Missouri, and one foreigner.

Owing to the crowded facilities for medical education throughout the United States, the difficulties in entering medical schools are becoming greater and greater, and the proportion of applicants accepted less and less. This has the advantage that the standard of those who apply is higher and also permits the selection of those best qualified intellectually, educationally and morally which should maintain or raise the standing of the medical profession. On the other hand it has the disadvantage of prohibiting many from entering who might, if permitted, become the most valuable practitioners. Furthermore, the number of M. D.s, might become comparatively so few and the cultists so many that their opportunities for doing good will be more and more hampered by being outnumbered.

During the past year the new ward building was opened and the school now has 180 hospital beds that are kept fully occupied. This will soon be increased to 300 beds when the new nurses' home is



completed which will release two more floors for the hospital beds. The last legislature did not provide for the construction of any new buildings for state institutions but it did provide funds for the finishing of the nurses' home.

The training school for nurses is receiving more applications than they can accept which permits the securing of the best type of student nurses. The school is discouraging an increase in number of pupil nurses owing to the difficulties graduate nurses are having in obtaining employment.

Last year besides giving post-graduate courses at the school by outstanding specialists from various parts of the United States, it gave a three-day intensive post-graduate course by members of the faculty for which approximately 75 doctors enrolled and no fee was charged. Also a course in obstetrics was given in the western part of the state by the head of the department of obstetrics and gynecology.

For patients unable to pay for laboratory and hospital diagnostic facilities, the school now offers these free and will forward the findings to the doctor if he will send a statement along with the patient that the patient is unable to pay for the clinical work ordered.

The last legislature passed a law providing funds for defraying all of the expenses for the care of crippled children. The Medical School feels that it is not large enough to take care of the demands that will be made upon it in the next few years, for now it is impossible to care for more than 30 to 40 of these children and that as soon as the law becomes effective it should have facilities to care for at least 100 to 150 and urgently requests that the profession call attention to the need of the school for a new building providing facilities for the carrying on of this work.

Respectfully submitted,

(Signed) L. F. BARNEY,  
L. G. ALLEN,  
H. F. HYNDMAN,  
M. C. MARTIN,  
E. S. EDGERTON.

Dr. Barney made a motion that the report be adopted and placed on file,

which was regularly seconded and carried.

#### REPORT OF COMMITTEE ON HOSPITAL SURVEY To the House of Delegates:

Your Hospital Committee, of which I am the Chairman, make the following report:

In making this report, we desire to advise you, in view of the fact that there are two agencies engaged in the work of examination and standardization of hospitals throughout the United States, is that the data contained in this report is obtained from the report of the Committee of the Council on Medical Education and Hospitals of the American Medical Association. They credit Kansas with 102 general hospitals. These hospitals have a bed capacity of 4,876 and 600 bassinets, average number of patients 2,638. Nervous and mental hospitals, including state and private sanatoriums, 12, with a bed capacity of 5,773 and average number of patients 5,169. Nineteen hospitals were refused registration. They have a bed capacity of 449 and 44 bassinets.

In analyzing this report one is struck by the large number of beds in hospitals for the treatment of nervous and mental diseases. While we have in Kansas a bed capacity in general hospitals of 4,876; the 12 sanatoriums for the treatment of nervous and mental diseases have 5,773 beds. While the average number of patients treated at general hospitals was 2,639 and the average number in nervous and mental hospitals was 5,109 last year. It was stated in the hospital report for the American Medical Association that the growth throughout the United States of nervous and mental cases was alarming and that if the present rate continued, by 1934 we would have more than one-half million persons in the hospitals and private sanatoriums in the United States. The figures for 1930 as compared with the 1929 report shows an increase of 19,635 and a total of 415,042. The increase in hospital beds in the state for the past year is only slight and the principal increase has been in the hospitals for the treatment of nervous and mental patients.

The great amount of money which has

been expended every year in cancer research and in the prevention of tuberculosis, with the great increase and constant growth of nervous and mental cases; it would seem to this committee that steps should be taken by some organization to ascertain if possible the cause for this constant increase in all states of the union of these nervous and mental cases.

Although business and industry were somewhat slack and generally disturbed in 1930, yet the total work done by all hospitals was slightly increased over the year 1929; but this increase applied to governmental and charity hospitals and those serving pay patients generally suffered a decrease. On the whole the hospitals in Kansas are up to the standard requirements of the Council on Medical Education and Hospitals of the American Medical Association.

Respectfully submitted,

(Signed) GEO. M. GRAY, Chairman.

ALFRED O'DONNELL.

Dr. Gray made a motion that the report be adopted and placed on file, which was regularly seconded and carried.

#### COMMITTEE ON MEDICAL HISTORY

Dr. McVey made a short verbal report, which was accepted.

#### REPORT OF COMMITTEE ON SCIENTIFIC WORK To the House of Delegates:

We desire to submit the following report:

We are somewhat elated over the work of the committee during the past year, inasmuch as we are in receipt of a letter from Dr. Arthur T. McCormick, Secretary Kentucky State Medical Association, one of the foremost secretaries of state medical societies; in which he asks for a copy of our program in part says: "I am so impressed with the excellency of your program that we want to have the benefit of it in arranging our next program."

We submit the 1931 program as evidence of the work accomplished by the committee.

Respectfully submitted,

J. F. HASSIG,

H. T. GROODY,

H. L. CHAMBERS.

Dr. Hassig made a motion that the report be adopted and placed on file, which was regularly seconded and carried.

#### REPORT OF COMMITTEE ON NECROLOGY

Dr. O. P. Davis made a motion which was regularly seconded and carried that Dr. Riley not read his report, but hand it to the secretary for publication in the Journal.

#### REPORT OF COMMITTEE ON STORMONT MEDICAL LIBRARY

To the House of Delegates:

The Stormont Medical Library is composed of 2,314 accessions, chiefly in the form of books and reports. In addition to this the library takes regularly the following journals:

American Journal of Diseases of Children, American Journal of Medical Science, American Journal of Obstetrics and Gynecology, American Journal of Public Health, Annals of Surgery, Archives of Internal Medicine, Archives of Ophthalmology, Archives of Pathology, Archives of Pediatrics, Archives of Surgery, Journal of Experimental Medicine, Journal of American Medical Association, Journal of the Kansas Medical Society, Journal of the Missouri Medical Association, Lancet (London), Medical Journal and Record, Quarterly Cumulative Index, Surgery, Gynecology and Obstetrics.

Fairly complete files of most of these are on hand. The library is housed in the State Library in the State House, Topeka, and cared for by the librarians in that library.

This library is supported by the interest from a sum of money, approximately \$5,000 which brings in in the neighborhood of \$300 each year which is spent on new books and on magazine subscriptions. The cost of binding the magazines is stood by the state and there is no charge on the part of the library for indexing the book.

A relatively small number of members of the State Society have the opportunity of using this unusual library. For this reason the committee feels it advisable to institute a loan plan for the books and magazines in this library. It is proposed that a list of members of the Kau-



sas State Medical Society be kept in the office of the librarian and that any member of this society may write to the State Library in Topeka and borrow for a period of two weeks any of the books or magazines in the library. The members shall enclose six cents in postage to cover mailing of the books or magazine with the understanding that he is to return it within the specified time of two weeks. We feel that in this way the library can be made of a great deal of use to many members all over the state and such an arrangement has been made with the librarian.

Respectfully submitted,

JOHN L. LATTIMORE,

W. F. BOWEN,

WILLIAM C. MENNINGER, Chairman.

Dr. O. P. Davis made a motion that the report be not read; but be incorporated in the minutes, which was regularly seconded and carried.

Dr. Davis introduced the following amendment to the by-laws:

Chapter IV, Section 2—"In addition to the delegates thus provided for, all members who have been elected and have served as President shall be permanent delegates at large with all the privileges of other delegates."

Meeting adjourned.

The adjourned meeting of the House of Delegates which was to be held immediately following the public meeting in the Wareham Theater was not called for want of a quorum.

#### MEETING OF THE HOUSE OF DELEGATES

Thursday, May 7, 1931

The House of Delegates met in the Grill Room, basement of the Wareham Hotel, Thursday, May 7. The meeting was called to order by the President, Dr. E. C. Duncan at 8:00 a. m.

Roll call showed that forty delegates were present including officers and councilors.

The following officers were elected:

President-elect, P. S. Mitchell, Iola.

Vice President, J. D. Colt, Sr., Manhattan.

Treasurer, Geo. M. Gray, Kansas City.

Delegate to American Medical Association:

Term 3 years, E. C. Duncan, Fredonia.

Councilors:

Third District, E. C. Duncan, Fredonia.

Sixth District, J. F. Gsell, Wichita.

Tenth District, I. B. Parker, Hill City.

Twelfth District, W. F. Fee, Meade.

(Continued in next issue)

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We have purchased the Radium owned and operated here-to-fore by the Kansas Radium Institute and will make every effort to give you and your patients the same courteous treatment and high degree of service you have received in the past.

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Ernest H. Decker, M.D.

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A burglar recently posed as a doctor and carried a stethoscope. Suspicion was aroused when it was discovered that his handwriting was legible.—Punch.

✱ ✱ ✱

Dibbs: "Have you seen one of those instruments which can tell when a man is lying?"

Higgs: "See one! I married one!"—C. C. N. Y. Mercury.

**WANTED**—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

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—RUSKIN

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# THE JOURNAL

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### Some Gastro-Intestinal Cases Observed by the General Practitioner

J. W. HELTON, M.D., Colony

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

We shall ask your leniency as we endeavor to present a few thoughts gathered from a number of cases commonly called gastro-intestinal disorders, seen just prior to, and during the late epidemic of poliomyelitis.

During this period of about two and a half months we saw some 38 cases which presented many symptoms in common with those preceding and accompanying the above malady and yet the important diagnostic points, loss of reflex and actual paralysis were wanting. Whether there was a connection with, or relation to this dreaded disease, we are not prepared to say. We have given the matter much thought, and much study, and then some more study and some more thought, and we are still thinking and still "dum."

Not having kept a case record of these cases and not having the advantage of laboratory findings, we shall be content to present them from a clinical aspect, with a view of obtaining rather than that of imparting knowledge.

While doubt and difference and bitter contention prevail among the various branches of medical science, experimentation and research, as to whether these conditions are inflammatory, catarrhal, infectious, epidemic, endemic or sporadic; whether due to one or more of the various types of bacillus of fermentation or putrefaction; whether caused by the amoeba coli, the bacillus coli communis, or to various other microorganisms frequenting the intestinal tract, the writer is just buggy enough to steer clear of the bug house, and leave the question of bugology to the bugologists, while we pursue the safer and more simple course of the general practitioner.

After a careful study and comparison of these cases, in an effort to determine whether they were or were not of a specific origin, we are inclined to believe that the clinical picture as a whole would favor the opinion that the condition prevailed in a mild epidemic form and was due to some species of pathogenic organism.

This conclusion, or rather opinion, was reached by a careful consideration and comparison of the following conditions: While the symptoms in the different cases varied to some extent, the difference was more in degree than in type, and the many symptoms in common, together with the close proximity of time and location, would reasonably group them together under the same nomenclature, and etiological factors.

In every case we had anorexia, nausea and vomiting, differing of course in its severity and duration.

In every case there was pyrexia ranging from 99° to 104°. The average group temperature was 102° and only in one case did it reach 104°. This case was a girl three years old and was seen by Dr. J. N. Carter, county health officer, as closely approximating poliomyelitis. However, no paralysis developed.

In only a few cases did we have the characteristic dysenteric stools, with evidence of sloughing and putrefaction.

In a few cases there was a slight mucous discharge with flatulence and tenderness over abdomen.

In practically all cases there was a white or brownish white coating over tongue.

In every case there was diarrhea, ranging from a very mild, to the most severe and stubborn character.

In no case included in this group were there bloody stools or severe griping.

In every case there was a weakness out of proportion to other symptoms.



In no case was there a loss of reflex, or even temporary paralysis.

While all ages were included, the cases among children were more prevalent, more severe, and usually of longer duration.

While there were cases scattered over a wide area, they seemed more prevalent in certain sections.

It might be well to state in this connection that during the treatment of these cases, we met with a single case of typhoid fever, which had many symptoms in common with those described, but which also showed the more typical symptoms of typhoid, including the widal test, and in the opinion of the writer had no relation to or connection with the above cases, though the treatment, including diet and general care, was very similar.

A study of the cause and contributing causes of these epidemics (if they are epidemics) is of much interest; whether they are brought about by the invasion of new microorganisms, or an increase in number or virulence of those already present in the intestine. And again, whether the medium in which they live and thrive and multiply may be rendered more fertile for their growth and activity by an impaired condition of the blood and other vital tissues, whose purpose it is to guard and defend the system against their activities. In the writer's opinion, the latter condition should at least be considered augmentative, if not playing an important role among the etiological factors.

Coming, as they often do and did at this particular time, after a long hot and dry summer, when the vegetables, fruit, milk and water supplies were unquestionably bad, we believe would amply justify this conclusion.

Whatever nomenclature we may choose, or whatever species of bacillus involved, we are convinced that a constant war is in progress between the standing army of defense that would strengthen and fortify the human system against the invasion of disease, and the great allied army of pathogenic organisms that would prey upon, weaken,

or destroy the vital tissues of life and health.

This line of battle, so to speak, may extend from "A" to izzard. In other words, if you please, from the oral sector on the north to the anal sector on the south, forming a line more tortuous and bent, and fraught with more peril and moment, than was the great Hindenburg line in France.

The belligerent army is constantly mobilized, ever alert, and ready to strike at the weaker points. These weaker points we will often find in the last portion of the ileum, the caecum, and the flexures of the colon, where the feces pause or pass more slowly. We believe that in a very great majority of intestinal infections, these sections of the gut are victims of attack.

While the stomach may in many instances, owing to improper food or impaired digestion, become a contributing factor, we are inclined to believe that in most of these and like cases the gastric conditions were the effect rather than the cause, the disturbed condition being brought about by nervous or reflex irritation, or perhaps due in part to a general toxemia.

In the management of these cases we tried to do all the managing we could and as little treating as possible. This perhaps accounts for the fact that all of these cases recovered.

Under care and management, we would mention four measures which we believe stand out as paramount. These are: cleanliness, diet, elimination and rest.

(1) All parts of the body as well as clothing and bedding should be kept clean (a fine place for some managing).

(2) Thorough elimination is indispensable, but should be accomplished with care and precaution. As an aperient we believe there is nothing better, safer, and more dependable than plain castor oil. Its alterative and checking qualities are unequaled and it is usually followed by a comparatively mild degree of weakness or shock. Here, however, is where your management is often snagged, when the child has a dislike for the oil, and the mother has a dislike for you, when you insist on its being given; but here is

where I get in some more management. I talk little and say less, but usually manage to manage the management. In the absence of a nurse I often do the trick myself, just to prove that it is doable. However, the best time to administer the castor oil is in the early morning, before the doctor gets there. As these conditions are usually found in the lower gut, frequent enemas with an occasional normal salt, given slowly, with the irrigator low, are very helpful.

(3) While the diet should be carefully selected, it should, on the other hand be flexible, suited of course to the various cases and various conditions.

Among the articles of diet, in these stubborn cases of vomiting and diarrhea we have found well cooked oat meal and fat-free buttermilk of most value and least harmful. The oat meal is astringent, allays irritation and offers protection to the tender mucosa. While having a low caloric unit, it has a larger protein content than any of the cereals.

Fresh fat-free buttermilk, being rich in protein is well tolerated by both stomach and bowels, aids in checking the troublesome vomiting and diarrhea, and at the same time provides water, to replenish the depleted system. Its protein, like that of the oat meal, is of much value in the process of building and repair, and we have found it much more agreeable in these cases than animal protein or that of eggs. Orange and other fruit juices and beef broth may be helpful more especially in the convalescent. We have found, however, that the closer these patients were held on the oat meal and buttermilk, the easier they were handled, and the shorter the duration.

(4) Rest in bed is an important factor in these cases. The surroundings should be quiet, the room well ventilated, and if possible have a goodly supply of sunlight.

If these measures are carefully followed, with reasonable variations of course (some more management), we will often find medicinal treatment of minor importance.

As to medication, as said above, we have tried to do as little treating as pos-

sible and all the management we could get by with.

The treatment like that of diet must of course be flexible. As an astringent and sedative to the mucous membrane, we prefer the subcarbonate or subnitrate of bismuth. As an intestinal antiseptic, we have found salol the most dependable in most cases. I like a combination of salol with the subcarbonate of bismuth and sulphocarbolates of zinc and soda.

I have found these ingredients well represented in the salol and bismuth compound of the Standard Chemical Co. I have used this product for a number of years and believe it worthy of mention. It is not only palatable, astringent, sedative and well tolerated, but contains a well balanced group of intestinal antiseptics, permanently suspended, in a manner that each ingredient maintains its potency, and dependable dosage. I usually begin with teaspoonful doses, one-half to one hour apart until gastric irritation is relieved, then two or three hours apart, or as needed. I have seldom had to use any considerable amount of antipyretics in conjunction with this treatment.

If diarrhea is persistent, I usually give 1 to 5 drops tr. of opium *only as needed* and only when awake.

We have found this (with the castor oil of course) about the only medicinal treatment required. In a few of the weaker cases it was necessary to support the heart. For this purpose we find strychnine, in proper and proportionate dosage the most dependable. However, we must watch for its accumulation. This is especially important in cases of defective or faulty renal elimination.

Whatever your diagnosis, and whatever your treatment, we still believe that the paramount issue in these cases is "management."

As to prophylactic measures, we believe there should be a closer relation and co-operation between the state board of health and the various county and city health officers, to the end that our milk, water and food supplies should be more carefully guarded and our public eating houses more frequently and more



carefully inspected by men qualified to perform these duties.

When you walk up town and see the show windows piled high and dry with fruits and vegetables, infested by bugs and cock roaches, and swarming with mosquitoes and flies, it is little short of criminal, and the life and health of our babies and our children demand that some measures be taken to rectify these deplorable conditions.

—————R—————

### **Clinical Interpretation and Application of Blood Chemistry**

J. L. LATTIMORE, M.D., Topeka

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

Keeping abreast, yes, almost preceding clinical medicine, the clinical laboratory and its allied branches have at least been a great factor in the progress of medicine. Just a few years ago many physicians went up and down the country, a few still do, bewailing the tendency to what they desired to call "technical medicine" and before this society and its branches, I have heard different physicians discredit the clinical laboratory and its findings. During the past 15 to 20 years, the laboratory has gone through its evolutionary stage, just as has medicine. There has been some antagonism. However, without the co-operation of the laboratory, many of our established facts would still be unknown. Certainly, the clinical laboratory is to a certain extent at fault, for we still have too many laboratories conducted by incompetent technicians, and along with these all other laboratories are discredited to a certain extent. However, through the efforts of such men as Haden, Kolmer, Sanford, McCarty, Kahn, Meyers and innumerable others, the clinical laboratory is becoming a very intricate part of medicine. The subject of the relation of the director of a laboratory, or the pathologist to the general practitioner, is almost a whole subject within itself.

At the present time, one of the pathologist's greatest problems is to train the physician in the interpretation of reports, in order that he may correlate the laboratory findings along with the phys-

ical findings and signs. May I make this prediction, within a few years we shall have the specialist in the clinical laboratory and why not if it makes for more efficiency, and after all is said and done that is the only excuse for any specialist. I predict that we will have the specialist in serology, pathology, bacteriology, chemistry and so on. As time goes by, we recognize that the field of the clinical laboratory is entirely too broad for one man to comprehend, so commanding in its study that it is impossible for one man to cover all the subjects. During the past few years we have come to recognize that our best men are becoming specialist, such as Haden as a hematologist, McCarty and Broders as pathologists, Meyers as a chemist, Kolmer as a serologist and others that are specializing in certain branches of the laboratory. We know that a man, a surgeon for example, cannot be a specialist in abdominal surgery, orthopedic surgery, plastic surgery, brain surgery, eye, ear, nose and throat surgery, all at the same time, so our surgeons are becoming specialists in certain types of surgery. If this be true of surgery, certainly the broad field of the clinical laboratory justifies specialization. I am sure you will agree that the man that specializes in everything, specializes in nothing. In the smaller cities we cannot have these specialists of each branch of the laboratory, so we do the next best thing and employ good technicians that can specialize in a certain type of work and then we physicians must be capable of interpreting the results and applying them to the case.

I desire to present a few points, relative to blood chemistry. Nothing original, but subjects that have come under my observation and I pass them along for what they are worth in an endeavor to stimulate the general practitioner to learn the value of certain laboratory tests. No attempt will be made to cover the entire field nor will I go into the technical problems of the different tests.

Probably the most commonly used blood chemical determination is that of blood sugar, because of either the greater prevalence or more frequent recognition of diabetes than in years past.

Practically all determinations are made, for the different blood chemical tests, on oxalated blood. For a complete determination, 15 c.c. of blood should be collected, 6 c.c. for urea, 5 c.c. for blood sugar, is sufficient. The patient should have no food for at least 8 hours, it is better still to collect the specimen in the morning before breakfast. Place a tourniquet above the elbow, cleanse the skin well with alcohol and collect sufficient blood from any of the prominent veins. Place immediately in a vial containing about 1 mgm. of potassium oxalate per 1 c.c. of blood, shake the specimen in a gentle rotary motion for two or three minutes. Excessive oxalate will make the blood foam, insufficient amount will not dissolve the fibrin. The blood should be examined within 12 hours. If longer time will elapse before the examination, a few drops of sodium flouride should be added as a preservative. This oxalated blood is suitable for the following determinations: complete blood count, red, white, differential and hemoglobin, Van den Bergh, blood culture, sedimentation rate, fragility test, color and volume index, icterus index and on the few that we have run the Wassermann does not vary from that of the unoxalated blood. The normal blood sugar varies from 80 to 125 milligrams per 100 c.c. of blood. The exact figure at which you are justified in making a diagnosis of diabetes is questionable. On repeated examinations, a blood that runs from 120 to 140 mgm is from at least a potential diabetic who I believe should be specifically instructed as to diet. A mere statement from the physician to leave off sweets and potatoes is very harmful. Specific instruction, kind of food and grams per day of carbohydrates, fats and proteins should be given to the patient and if you are not willing to take the time to do this, you should refer the patient to some physician that will give these instructions. When the blood sugar goes above 140 mgm I believe you are justified in making an unqualified diagnosis of diabetes and the patient should be immediately placed upon a basal diet, to be increased later if proof is obtained that the patient can

tolerate more. The threshold point is the low saturation point of the blood and usually this point is about 170 to 185 mgm. I like to compare this point with the top of a dam in the river. The water backs up gradually, and finally it reaches the top of the dam and goes over. In the blood the sugar increases and finally reaches a saturation point and is thrown over the top of the dam, the threshold point. As stated, the top of this dam is usually about 170 to 185 mgm, however the threshold point may vary greatly, some going as high as 300 mgm without showing sugar in the urine. As a contrast, we have the insipidus type, where sugar appears in the urine with little or no increase in the blood sugar, the threshold point in this case would be near 100 mgms. In other words, we may have diabetes without sugar showing in the urine, again we may have considerable sugar in the urine and no diabetes. Personally I favor the control of diabetes without the use of insulin, where this is possible and still supply the patient with a sufficient number of calories to carry on needed work. In the average diabetic, we attempt to keep the blood sugar well below 200 mgm, and if we are unable to do this with diet we then resort to insulin. I have had patients walk into my office with a blood sugar of over 700 mgm. On the contrary, we must consider low blood sugars in cases using insulin. In over-dose of insulin, when the blood sugar goes down to about 50 mgm, the patient will show definite symptoms, such as nervousness, apprehension, profuse sweating, etc., and unless relief is immediately obtained by the use of carbohydrates, the patient will often go on to speedy death. I will not take your time to go into the details of the treatment of diabetes, but would like to mention a few things about coma. With the diagnosis assured, large doses of insulin should be used, from 25 to 50 units given each hour, using the presence of sugar in the urine as an index if further insulin is to be used and upon finding the urine sugar free, do not repeat the dose of insulin. Carbohydrate, usually glucose intravenously, is administered. However, no glucose need be given until



the blood sugar has returned to about normal. As Joslin expresses it "fear of the insulin is the excuse for additional glucose." While talking about blood sugar, may I mention a sugar finding that is rather important. In epidemic meningitis, due to the meningococcus, the initial spinal sugar determination is low, active treatment is instituted, both by blood and spine and repeating the dose two or three times during each 24 hours until patient improves. The spinal fluid sugar should show immediate increase, after treatment. Should the sugar not show increase, a very grave prognosis should be given for almost always that patient will not respond to the serum.

Urea, formed largely in the liver from ammonia, is mostly excreted through the kidneys and its retention is evidence of renal failure. Normally urea is 50 per cent of the total non-protein-nitrogen, while urea nitrogen is 50 per cent of the urea. The accepted normal for urea is from 25 to 30 mgm per 100 c.c. of blood. From the prognostic standpoint, urea is the most dependable single test as an index to the kidney function. Urea above 35 mgm is considered as definitely pathological, the higher the urea, the more serious the case and very high readings, 100 to 200 mgm, are often obtained in terminal interstitial nephritis, polycystic kidney, bichloride poisoning and in many of the acute infectious diseases, complicated with renal insufficiency. Urea retention is retarded in children and often is not increased in nephritis, but when it does occur, it is an extremely grave condition. As preoperative prognostic information in prostatic cases, the urea is of special value; with readings of 35 to 40 mgm, the patient is operated upon with at least some apprehension, with readings above 40 mgm, the operation is considered by most surgeons as contra-indicated.

Creatinin, an end product of the chemical breaking down of creatin, is present normally up to 2.5 mgm per 100 c.c. of blood and has its special value in making a prognosis on a case of kidney insufficiency. With very rare exceptions, a creatinin finding of more than 5 mgm indicates an early death. In all nephritis

cases showing a urea of more than 60 mgm we routinely run a creatinin and are often amazed at the results, of finding one that runs as high as 8, 10 or even 15 mgm, and with the exception of acute nephritis readings of this height are an indication of an ensuing death.

Uric acid has its special value in the diagnosis of gout, although it is increased in numerous conditions such as nephritis, various cardiac conditions, severe anemia, etc. If the urea is normal and other physical findings absent, thus excluding the above conditions, and we have a uric acid that is above 4 mgm gout certainly is suggested. Shanberg and Brown call attention to increase of uric acid in eczema and suggest regulation of diet which at least makes the case more amenable to treatment. Specially, I want to remind you that a uric acid determination is valueless without knowledge of the urea or non-protein nitrogen.

Although considerable study of cholesterol has been made, its exact function is not known. The normal cholesterol is from 150 to 200 mgm per 100 c.c. of blood. Cholesterol being abundantly present in all foods and body cells, low findings are not likely except in starvation. Severe toxic goitre is reported to give a low reading, while true myxedema is accompanied by increased cholesterol. Mason believes that cholesterol values are of definite help in estimating the gravity of hyperthyroidism, also that prognostic aid can be obtained. In my hands, the findings in cholesterol determinations have been so varied that not much clinical aid can be obtained. Studies along the above lines are justified.

Much has been written and much study done on the subject of calcium, yet the clinical status is not well established. We know that the main function of calcium is in the growth of the bones and that the normal calcium is from 7 to 12 mgm per 100 c.c. of blood. Following fracture, the calcium remains normal, while the phosphorus which normally is from 1 to 4 mgm rises rapidly, but soon returns to normal. It is impossible to prognosticate the healing of a fracture from the calcium determination. It has been proven

experimentally on animals that, following thyroparathyroidectomy, with the resulting hypocalcemia, there is delay in union. Pregnancy, jaundice, pellagra, tetany and nephritis give low calcium findings. Experimentally, tetany has been produced by lowering the blood calcium. The administration by mouth will elevate the calcium, making the intravenous administration unnecessary. With calcium studies made on almost all diseases, definite clinical importance is yet to be ascertained.

Chlorides, normally present from 475 to 525 mgm per 100 c.c. of blood also have been the subject of much consideration. Other than a very few conditions, little help is obtained from this determination. In active pernicious anemia the cell chloride is definitely low, below 260 mgm, while the plasma chloride is constant, however with other procedures, such as volume index, color index, absence of free HCl from the stomach and study of the individual cells, platelet count, showing more typical changes, chloride determination has not been used extensively in work on primary anemia. In intestinal obstruction the chlorides are proportionately decreased with the vomiting, after about 48 hours.

Acidosis may occur because of an abnormal formation of certain acid substances or may occur from a decreased elimination of these acid substances. Not until the late stages of acidosis does the actual acidity of the blood vary from normal, due to the peculiar buffer power of the blood. This can be demonstrated by taking normal blood and adding, drop by drop, hydrochloric acid and the reaction will not change until the buffer is depleted. Carbon dioxide, the most important end product of metabolism, passes from the cells to the blood, where it combines with inorganic alkalies and for the greater part is eliminated through the lungs, leaving the alkalies, mainly sodium carbonate, to return to the tissues to repeat their process of combining with carbon dioxide and again the trip to the lungs. When excessive acid bodies enter the blood, they combine with the alkalies, thus reducing the amount that is available to combine with

carbon dioxide, resulting in the accumulation of carbon dioxide in the tissues, with consequent blocking of the process of oxidation, producing the clinical picture of air hunger. In actual practice, we see only two conditions that are much of a factor, so far as acidosis is concerned, diabetes and acute and interstitial nephritis. In diabetes we have the excessive acid formation of beta-oxybutyric acid from defective oxidation of fats, either in starvation or disturbance of carbohydrate metabolism. In fevers we have acidosis due to excessive decomposition of proteins, while in certain excessive intestinal fermentations, we have acid formation. The other type of acidosis is the accumulation type and is present in kidney lesions, where the ability to eliminate acid is impaired. Also this type of acidosis is seen in certain cases of severe diarrhea. In contrast, we have alkalosis, where the carbon dioxide combining power is high. This condition is often seen in kidney conditions where there is impaired function. The normal carbon dioxide combining capacity of plasma of venous blood is 60 to 70 per cent c.c. of carbon dioxide per 100 c.c. of plasma, while figures below 50 per cent indicate acidosis and below 30 per cent indicate severe acidosis. This is a very valuable test and of immense clinical importance, but is a test that is not used as much as it deserves, because of the mechanical difficulty encountered in performance of the test. In collecting the blood the patient must be at rest for an hour or two, then collect 6 to 8 c.c. of blood, with as little constriction as possible and with as little exposure to air as possible, place immediately in oxalate bottle and shake in rotary motion. Better still, collect the specimen and oxalate the blood, under a layer of paraffin oil.

I have in no way endeavored to cover the entire field, but have tried to present some practical points I have observed in my own experience. Other numerous tests have a very definite place, such as the Van den Bergh test for liver dysfunction, pro-thrombin time in differentiating hemophilia and organic dysfunction, the accurate chemical estimation of hemoglobin in the anemias, cell



fragility in hemolytic jaundice, the suggested value of the sedimentation rate.

I sincerely trust that each physician will endeavor to at least qualify himself to interpret most of the clinical laboratory reports.

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### **Report of Committee on Necrology**

B. R. RILEY, M.D., Chairman

The number of physicians who died in Kansas, from April 15, 1930, to April 15, 1931, was 48. The average age was 70 7/16 years. The youngest physician dying was 48 years of age, and the eldest was 99 years of age.

In classifying the causes of death, it becomes necessary to classify those with heart lesions, associated with renal disease and the sub-divisions from myocarditis to endocarditis, etc., all as heart lesions, the number being 8. Those dying of cerebral hemorrhage being 9; senility, 6; carcinoma, 3; unclassified, 2; automobile accidents, 4; appendicitis, 2; endocarditis, 2; and cholecystitis, 2. All of the following diseases claimed one each: pneumonia, angina pectoris, obstruction of the bowel, peritonitis, coronary thrombosis, renal calculus, leukemia, tuberculosis, uremia, and suicide claimed 1.

Some few of these reports have gone back of April 15, 1930, due to the fact that they had not been reported prior to the committee's report of last year.

The replacements in cities of the second and third class, by the location of physicians in these cities in Kansas, has been 34. In making this report no effort has been made to supply the number of physicians locating in the cities of first class. This has not been taken into consideration, as I presumed them to be sufficient for the needs thereof.

Every effort has been made to collect all data on which to base this report, and while we have used all available means at our command to collect such data, yet I presume it to be incomplete as it will always remain, until county organizations act upon the request of this committee.

#### **A REPORT OF THE DEATHS OF PHYSICIANS IN KANSAS**

MILLARD F. MARKS, Valley Falls, aged 71, died of cerebral hemorrhage, April

24, 1930. He was graduated from the Kansas City Medical College, in 1888. He was formerly a member of the state legislature.

GEORGE W. GABRIEL, Parsons, aged 86, died of senility, April 29, 1930. He was graduated from the Kansas City, Mo., Medical College in 1871. He was a Civil War veteran; formerly mayor, a member of the state legislature, and state senator. He had practiced for 57 years.

FRANK L. STALLARD, Geuda Springs, aged 52, died of cerebral hemorrhage, April 26, 1930. He was graduated from the Kentucky University Medical Department, at Louisville, 1906.

ROBERT GORDON KOGER, Cheney, aged 48, died of endocarditis, May 14, 1930. He was graduated from the Hospital College of Medicine, Medical Department, Central University of Louisville, Kentucky, 1905. He was a member of the American Medical Association.

JOSEPH ELIAS MILLER, Salina, aged 67 years, 9 months, 24 days; died of carcinoma of the bladder on April 29, 1930. He was graduated from Jefferson Medical College, Philadelphia, in 1886. He was on the staff of Asbury Protestant Hospital. He was a member of the society.

B. P. DUDLEY, Silver Lake, aged 73, died at Excelsior Springs, Mo. He was graduated from New York University Medical College in 1882.

LOUIS W. MINICK, Wichita, aged 66, died of pneumonia, April 13, 1930. He was graduated from the Homeopathic Medical College of Missouri in 1894.

GEORGE N. HARTWELL, Jamestown, aged 76, died from angina pectoris, May 20, 1930. He was graduated from the University of Michigan in 1878. He had practiced in Jamestown since 1879.

MILTON S. MCGREW, Holton, aged 63, died of cerebral embolism, May 9, 1930. He was graduated from the Hahnemann Medical College, Chicago, in 1891. He was a member of the society.

AUGUSTUS M. MORROW, Liberal, aged 59, died of heart disease, July 17, 1930. He was graduated from Keokuk Medical College in 1898. He was a member of the society.

WILLIAM JOHN LOWIS, Colby, aged 53, died of acute appendicitis, at Twin Falls, Idaho, July 9, 1930. He was graduated from Northwestern University Medical School, Chicago, in 1904. He was a member of the society. Served in the World War. He was born at Morrisonville, Ill., September 30, 1876.

WILLIAM E. MOWERY, Scott City, aged 73, died in the Asbury Hospital, Salina, of injuries received in an automobile accident, June 24, 1930. He was graduated from the Eclectic Medical Institute, Cincinnati, 1887.

RAWLINGS CLARENCE FEAR, Gardner, aged 63, died of heart disease, June 9, 1930. He was a graduate of Marion-Sims College of Medicine, St. Louis, in 1897.

HAROLD J. CHAPMAN, Speed, aged 62, died of peritonitis, following an operation for obstruction of the duodenum and gallstones, in the Presbyterian Hospital, Chicago. He was graduated from the Wisconsin Eclectic Medical School, Milwaukee, 1896.

GEORGE ERNEST WEBBER, Morland, aged 57, was killed August 12, 1930, when his car hit a culvert. He was a graduate of Medico Chirurgical College of Kansas City, 1904.

LEWIS SMITH HALL, Augusta, aged 74, died of carcinoma of prostate, October 15, 1930.

WINFIELD SCOTT RUNKLE, Washington, aged 79, died of renal calculus, June 20, 1930.

ERICA ANDERSON, Garden Plains, aged 59, died of obstruction of the bowel, August 2, 1890. He was born in Stockholm, Sweden.

JACOB WM. DUNHAM, Wichita, aged 67, died of right cerebral hemorrhage, August 13, 1930. He was a college (medical) graduate, but did not take out a license.

BYRON L. HALE, Cherryvale, aged 63, died of prostate carcinoma, September 17, 1930. He was graduated from the Kansas Medical College, Topeka, in 1900. He was a member of the society.

WILLIAM G. LEREW, Glade, aged 67, died in an automobile accident, September 28, 1930. He was graduated from

Northwestern Medical School at St. Joseph, Mo., in 1892.

CLIFFORD ROBERT SPAIN, Arkansas City, aged 54, died January 11, 1931, of renal cardio-vascular disease with hypertension. He was born at Newton, Iowa, on December 11, 1876.

FRED A. COGSWELL, Leona, aged 67, died in October, 1930, in Wetmore. He was graduated in 1889, from the State University of Iowa College of Medicine at Iowa City.

GEORGE HEWETT SMITH, Kansas City, Kan., aged 62, graduated from the Eclectic Medical University, Kansas City, in 1906; was a member of the Kansas Medical Society; served during the World War; on the staff of the Bethany Hospital, where he died, November 29, 1930, following an operation for appendicitis.

NORTON J. TAYLOR, Berryton, aged 88, died December 19, 1930. He was born January 5, 1842, at Chagris Falls, Ohio. He was graduated from the University of Pennsylvania Medical School in 1865. He located at Berryton in 1869 and had practiced there continually until a few weeks before his death. He was a member of the society. Died of cholecystitis.

CHARLES REWERTS, Garden City, aged 49, died suddenly on December 17, 1930. He was graduated from the University Medical College, Kansas City, Mo., in 1911 and had practiced in Garden City for twenty years. He was a member of the society. Past president of the Finney County Medical Society; physician to the Garden City Hospital. Died of cerebral hemorrhage and hypertension.

THEODORE GRIFFIN, Kansas City, Kan., aged 88, died of myocarditis, senility. He was born in New York, May 31, 1842.

DAVID PELLER BOUCHER, Anthony, aged 93. Born November 26, 1837, at Cairo, Mo., and died January 2, 1931, of old age. General practice until 1906. Spent 36 years in practice.

GEORGE DYRE PEARN, Dearing, Montgomery County, aged 60, died December 14, 1930, of intestinal obstruction and chronic myocarditis. Was born in Erie, Pa., October 27, 1871. Spent 35 years in practice. Last practice was in 1930.

CARL AUGUST PALM, Colony, aged 63,



died November 23, 1930, of heart disease. He was a graduate of the Medical Department University of Illinois, Chicago, in 1905. Was born in Sweden, June 22, 1867. Spent 23 years in practice. Was a member of the Anderson County and State Medical societies.

JAMES BACONE JONES, Garnett, Anderson County, aged 83. Born in Indiana, October 21, 1847. Died December 8, 1930, of acute cholecystitis. Practiced until 1920. Licensed in Kansas in 1901. Was a Civil War veteran.

LAUREL A. SUMMERS, Wheaton, died December 1, 1930, of fracture of cervical vertebra, resulting from an automobile accident. Born August 7, 1866, at Graveland, Indiana. Practiced 30 years. Aged 64. Graduated from Marion-Sims College of Medicine, St. Louis, in 1893.

SAMUEL FLETCHER GEORGE, Wichita, died January 31, 1931, of cardio bronchial asthma and senility, aged 87. He was born in Elmira, N. Y., February 16, 1843. Spent 25 years in the practice of medicine.

JACOB LAZEN HAUSMAN, Marysville, aged 69, died February 2, 1931, in Columbus, Ohio, of leukemia. Was graduated from Ensworth Medical College, St. Joseph, Mo., in 1895. Was a member of the Kansas Medical Society. Was a former health officer.

EDWIN THEODORE METCALF, Colony, died November 27, 1930, aged 87. He fell on Monday morning, November 24. Cerebral hemorrhage followed, resulting in death. Born near Carlinville, Ill., July 27, 1843. Was a Civil War veteran. Was licensed in Kansas in 1901.

ROBERT EUGENE BARKER, Kansas City, Kan., aged 57, died February 17, 1930, in Bethany Hospital, of acute dilatation of the heart, following an operation for gall stones. He was graduated from the University of Kansas School of medicine in 1901. He was a member of the society.

JOSEPH SAMUEL LESLIE, Tribune, aged 68, died December 27, 1930, of pulmonary tuberculosis. He was graduated from the Barnes Medical College, St. Louis, in 1897.

OLIVER P. BRANSON, Wichita, aged 76, died February 5, 1930, of heart disease.

He was graduated from the American Medical College, St. Louis, in 1895.

WILLIAM A. BARNHARDT, Walnut Grove, Neosho County, died June 21, 1930, of endocarditis pericarditis, and arterio sclerosis, aged 91. Born in Ohio, December 25, 1838. Last practice in 1925. He spent 40 years in the practice of medicine.

BENJAMIN A. McLEMORE, Fort Scott, aged 70, died of interstitial nephritis and cerebral hemorrhage, May 27, 1930. He was a graduate of Meharry Medical College, Nashville, in 1887. He was a member of the society.

EMIL H. LEHMANN, Alma, aged 62, was found dead, May 12, 1930, of a self-inflicted bullet wound. He was graduated from Barnes Medical College, St. Louis, 1901.

JOHN SIMPSON BLACK, Virgil, aged 84, died of cerebral hemorrhage, April 20, 1930. He was not a graduate of a medical school but was licensed in 1901.

ARTHUR LEE LUDWICK, Overland Park, aged 58, died at St. Mary's Hospital, Kansas City, Mo., of coronary occlusion, March 2, 1930. He was graduated from the University Medical College, Kansas City, Mo., in 1894. During the World War he was a major in the medical corps, and attended the Army Flight Surgeons' School, Mineola, L. I. At the time of his death he was a lieutenant colonel in the medical reserve corps. He specialized in nervous and mental diseases. He had served as president of Johnson County Society, and was a Fellow of the American Medical Association.

WILLIAM RILEY AVERY, Hutchinson, died July 30, 1930, of arterio sclerosis and senility, aged 92. Born in Indiana, March 19, 1839. Spent 42 years in the practice of medicine. He last practiced in September 1907.

ALLEN JAMES MARTIN, Ottawa, aged 99, died February 24, 1931, of uremia due to prostatic obstruction. He was not a graduate. Was licensed by the Kansas Eclectic Board, July 7, 1879.

LEWIS H. DEMARR, Olivet, Osage County, aged 82, died February 16, 1931, of senility and pneumonia. He was born in Maryland, September 29, 1848. Was

graduated from Iowa Eclectic School in 1893.

MARY RAGSDALE, Emporia, aged 77, died March 26, 1931, of myocarditis, following influenza at the first of March. Born at Lincolnville, Maine, January 27, 1854. She had spent 24 years in the practice of medicine. Last practice was in 1905.

CHARLES HENRY BACON, Hutchinson, aged 73, died January 23, 1931, of cerebral apoplexy, and chronic hypertension. He was born in Franklin County, Indiana, on May 13, 1857. He had retired.

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### The Mortality of Appendicitis

D. W. BASHAM, M.D., Wichita

Read at Enid, Oklahoma, Medical Society, March 20, 1931.

There is a widely spread belief among surgeons, generally, that the mortality of appendicitis at the present time shows an increase much above that of earlier periods in the history of the surgical treatment of the disease. No one, however, has taken the task upon himself to prove this by statistics. Statistics collected from a general source, as a rule, cannot be accepted seriously in proof of anything. In order to establish any fact whatsoever, medical or otherwise, by compiled statistics, much greater care must be exercised in the gathering and the elaboration and classifying of data than is usually the case.

Let it be assumed then that there is an actual increase in the death rate of appendicitis, or let it be admitted that there is no increase in the mortality of the disease, nevertheless there are still far too many fatalities in connection with operation for appendicitis. Too many deaths because our profession may have failed to give the serious consideration to a universally prevalent disease that has been bestowed upon affections of less frequent occurrence. Surgeons and physicians should be able to show a progressively diminishing mortality from any disease that has been under observation as long as has appendicitis.

Much of this situation may be due to the fact that appendicitis is a malady that confronts us constantly. We are, therefore, prone to adopt a routine

course with the idea that when the appendix has been ablated our duty to the patient has been fully discharged. I sometimes think that physicians are open to the same criticism when they put forth their most serious efforts in the study of the very rare diseases almost to the total exclusion of the ordinary affections, as measles or scarlet fever, that may be attended by complications and sequellae that leave an impress upon the unfortunate patient throughout his lifetime.

In order to evaluate the statistics or the treatment of appendicitis we must first rule out of the count all cases of operation where the appendix shows but little or no pathology. A vast proportion of the operations on the appendix belong to this class. I do not mean to infer that such operations should not be done nor that we should wait until suppuration, perforation and gangrene are present before operating. In the discussion of the mortality from appendicitis such cases cannot be taken into consideration, for practically all such cases should recover, while in the presence of grave pathology there must be a certain mortality. The death rate in such cases is difficult to estimate because no effort has been made to include in the statistics only such cases as have gone on to suppuration. Suppuration, perforation and gangrene with leakage and destruction of tissue are the end results of neglected appendicitis. These are things which vitiate our statistics on appendicitis. Again, cases presenting no pathologic metamorphoses in the structures of the appendix cannot rightfully be classified, for statistical purposes, with cases complicated with suppuration, perforation, gangrene and local or general peritonitis.

The salient causes of death from appendicitis may be classified as conditions encountered at the time of operation, and complications arising afterward.

Success in the management of appendicitis depends upon the knowledge and judgment of the operator to know how to deal with these formidable conditions when encountered in the course of operation. There may be an established



orthodox technique for entering the abdomen of the appendicitis patient but there can be no predetermined and invariable method of procedure applicable to all cases after the peritoneal cavity is once opened. Once within the cavity of the abdomen further operative manipulations must be determined by the conditions encountered there.

In the early years of surgery of the appendix none but the suppurative cases came to operation. It was then the universal practice to institute drainage as soon as pus was found, and the case was finished at a later date with a second operation. Most of these cases recovered satisfactorily but the stay in the hospital was prolonged. This method is simple and, in certain instances, still safer than to deal radically with the appendix at the primary operation which involves the placing of ligatures and sutures in a field which is highly infected. If the bowels are obstructed and distended and the patient is vomiting it may tax the surgeon's ingenuity to the extreme to determine the safer procedure to follow. The intestine in juxtaposition to the suppurating or gangrenous appendix may be covered with a whitish exudate. The omentum enveloping the appendix may be in a state of gangrene, and the vessels may be extensively thrombosed. The peritoneal cavity, especially that of the pelvis, may literally be inundated with a whitish fluid of milky consistency that one can hardly differentiate between lymph and pus. This would be the wrong sort of a case to treat by the Ochsner method. Each of the conditions enumerated may require a different maneuver to meet the exigency at hand. Appendoliths often escape through the ulcerated walls of the appendix and lie loose at the bottom of the abscess cavity. They should be removed, for they hinder healing by prolonging suppuration. The drainage should reach every point where pus is collected. The choice of drainage material should depend upon the conditions present. If there is oozing of blood in the floor of the field of operation gauze meets the indications best because it facilitates clotting and may be made to exert some pressure upon the oozing

surface. If there is but little pus and only slight distension the ordinary cigarette drain will meet the indications. If there is widely disseminated suppuration multiple cigarettes are required. The subhepatic space should be drained to obviate the formation of subphrenic abscess. Drains should be inserted to the most dependent part of the pelvic cavity. Here one should use the greatest care to so place the drain that the iliac vessels are not impinged upon for fear of erosion and fatal hemorrhage. Remember that both ends of the drain soon become more or less fixed causing the middle portion to press with considerable force upon the vein and artery. It may sometimes be advisable where the pus has settled down in the lower pelvic cavity to make a suprapubic wound for drainage. This is safer and more efficient and obviates the danger of erosion into the iliac vessels. In the retrocecal variety of appendicitis with suppuration and gangrene it is safer to make an incision in the ilio lumbar space for drainage. This wound should be placed well above the crest of the ilium so as not to infect the bone. The incision should be large enough to safeguard against contraction upon the drainage tube thus defeating the efficiency of its operation. If the leaf of omentum found enveloping the gangrenous appendix is thickened and discolored from thrombosis I believe it is safer to amputate the diseased portion in order to diminish the risk of thrombosis and pyelphlebitis. If the ileum or the bowel is thickened and much distended with gas and fecal matter and indications of obstruction exist it is well to make a small longitudinal incision in the ileum about three inches beyond the ileocecal juncture and insert a good-sized catheter which should be secured with a stitch. If it is convenient let the catheter or tube be passed through a leaf of the omentum before entering the bowel. Closure of the fistula will be greatly facilitated by this simple measure. With a catheter thus placed the bowel may be irrigated, fluids may be administered, and the gases will be permitted to escape.

There may exist conditions about the

head of the cecum and terminal ileum of such a serious nature as to require anastomosis of the ileum to the ascending or the transverse colon. If the ileocecal region is incarcerated in a mass of inflammatory material or if it be extensively gangrenous this is perhaps the safest method of procedure. There are some operators who employ jejunostomy, but in my own experience this has been rarely necessary. The duodenal tube via the nares may well supplant this procedure. If these measures are not instituted at the time of operation it may become necessary to resort to enterostomy at some later time and in much less favorable circumstances.

Drains once introduced should be allowed to remain undisturbed until their purpose has been fulfilled. When a drain has once been removed it will usually be found a matter of much difficulty to reintroduce it in the same place, and very serious trauma may result from the effort to do so.

The simple uncomplicated case of appendicitis usually recovers no matter who does the operation, but there is no other field of surgery where knowledge, surgical acumen, experience and manual dexterity count for so much as in the treatment of appendicitis and its graver complications. A little forethought and prompt and well directed action may obviate death from peritonitis or obstruction. It would seem that we should not be called upon to see these serious and neglected cases of appendicitis in this day of universal enlightenment, but for some inscrutable reason or other they seem to be increasing. Just where the blame should be placed it is difficult to say. In many instances the people do not summon medical aid until the case has already assumed a serious outlook. If the doctor finds it difficult to arrive at a satisfactory diagnosis and advises hospitalization they often wish to wait awhile. Osteopaths, chiropractors and christian scientists not infrequently see these cases first and set out to handle them in their own peculiar way often much to the disadvantage of the patient, besides causing dangerous delay.

The public must be led to understand that appendicitis is a surgical disease requiring nothing but surgical treatment. Also, it must be understood that early operation is obligatory if we would save the greatest number of these cases.

The disease often advances with astonishing rapidity. A man may be at his work during the day and have a perforated appendix that night. Early operation is therefore the only rational therapy to be advised.

The greatest harm may result from the injudicious employment of harsh cathartics. Persistence in the taking of food may excite troublesome vomiting. The postoperative treatment of the appendicitis patient while simple is very important. Pain should be controlled by the judicious use of narcotics. Vomiting should be controlled by gastric lavage. The intravenous administration of dextrose with normal saline often has a marked influence over nausea and vomiting. Acidosis following ether and starvation are potent factors in the causation of nausea and vomiting. Dextrose intravenously serves to combat this condition. Besides, dextrose is a powerful cardio-renal stimulant and a food. It is well to bear in mind that dextrose when given intravenously in concentrated solution exerts a sclerosing action upon the veins. I therefore use only a five per cent solution.

Acute dilatation of the stomach and duodenal kink are treated by gastric lavage and the transpyloric or duodenal tube. Fluids may be administered by the duodenal tube. Gastric lavage before the patient leaves the table should not be neglected. It is not altogether safe to give large quantities of fluids per rectum after operation for appendicitis especially when the tissues about the cecum are in a friable condition and sutures have been employed. Cathartics are undesirable in the post-operative stage. Enemata should be small, at most not large enough to fill the colon and distend the cecum. Much discretion should be shown in the administration of food both as to time and the character of nourishment. I never had any luck with heavy feeding.

The principal purpose of this paper is



first to draw the attention of surgeons to the high mortality of appendicitis, its increased frequency, and secondly to stimulate a desire to perfect the surgical treatment of the malady.

Many physicians succumb to this disease, as you may verify by looking over the death lists in the journals. It behooves us then as the legitimate guardians of the public health to seek out the reason for this unfavorable turn in the course of this very frequent disease. It is our duty to study diligently to improve our methods of dealing with the graver forms of the malady. At the same time let us by all honest means endeavor to merit the full confidence of the public to the end that the sick may look to us first instead of last for aid. Certainly we should stand nearer to the people than stands that vast troupe of cultists and irregulars whom they often, if not generally, consult before coming to us, thereby not infrequently losing the chance for life through delay. Finally, let the beneficent profession of medicine strive to regain its honored place in the confidence of the public and let no one doubt our genuine interest in the welfare of our race.

#### —R— **Laparotrachelotomy**

L. S. NELSON, M.D., Salina

It seems that little or no literature on the subject has appeared in the middle west nor has there been much if any discussion on Cervical Cesarean Section. It is for this reason that the following review is given.

From an historical point of view this operation is much older than I had supposed since the first recorded case which I could discover was done one hundred years before Einhom discovered novocaine—or in 1805. There were, however, from then on during the century following only a few scattered cases reported with somewhat varying results as might well be expected. There has been, however, a very rapid increase in its use within the last twenty-five years. Now we can find sufficient numbers of cases to give us some conclusive evidence. Some of these will be briefly reviewed here.

In 1925 De Lee of Chicago reviewed 338 cases of laparotrachelotomy performed in Chicago by eight different surgeons with only two deaths or a mortality of .66 per cent. Another group of statistics was compiled by a special committee of the Brooklyn Gynecological Society which made a critical study in thirty hospitals of all sections over a given period of time. These covered 1202 sections in which only 187 were laparotrachelotomies and in these there was a mortality of 4.2 per cent while in 1015 classical cesareans yielded a mortality of 5.9 per cent. The latter figure is admittedly low and better than most similar reports would be. This committee even examined into the separate cases and concluded their report with a definite statement that the low cervical operation though done only 187 times, had been given a much severer test throughout the series than the classical because of the poorer risks and despite that fact its mortality record was much better.

After this report there were fewer skeptics but they continued their studies to discover that the morbidity record of these cases would be compared with 187 random classical cases and they reported a definitely better morbidity record for the laparotrachelotomy than for classical cesarean.

Waterwald has added his voice to the above committee report after studying 3600 records of low cervical cesareans and says that not only is there a lower mortality but also a lower morbidity. I was unable to find in the literature any individual or group having studied the situation who did not admit those two points though some admittedly started with prejudiced minds.

The indications for cesarean have not changed. There exists only slight differences of opinion with reference to enlarging the indications. All conservative authorities are agreed that because greater safety to the patient is present in the newer procedure it is yet less safe than the passage of the infant through the natural parturient canal. It is therefore not offered as an "open sesame" to all obstetric difficulties but as a safer

procedure when abdominal delivery is thoroughly indicated.

The technique of laparotrachelotomy varies like all such procedures in different hands but in general one notices the technique devised by Koenig as being fundamental. This is briefly and with minor changes as follows:

A midline incision is made which is immediately suprapubic and usually not more than five to six inches in length. Then with the bladder entirely empty the peritoneum is picked up about three centimeters above the bladder attachment where there is a transverse fold. Now along this fold a four inch transverse incision is made. The peritoneum is then dissected carefully off of the cervix downward and fundus upward until sufficient space is denuded for the incision through the cervix. The abdominal incision needs to be retracted downward constantly with some type of wide bladder retractor to keep the bladder out of danger and also to secure the best possible view of the operative field. The upper peritoneal flap dissected from the isthmus and part of the fundus is often quite difficult because the higher one progresses on the fundus the more dense the adhesions therefore extra care must be used at this point. When these flaps are loosened they may be sutured to their respective angles of the abdominal incision with a single suture of any type to further protect the parietal peritoneum. We are ready now to open the cervix under this denuded area, an incision only about four inches in length being necessary. The finger of the operator is then placed in the mouth of the foetus and its face rotated upward and wiped clean. A light pair of forceps is usually applied at this point to assist the head slowly and carefully through the cervical incision. The placenta is removed without pressure and a dry pack placed in the uterine fundus for a few minutes. The cervical incision is now closed with two rows; the inner of plain gut; the outer of chromic and the peritoneal flaps sutured with continuous plain cat gut. The abdomen closed as usual.

The technical difficulties are the ele-

vating of the peritoneum which may be easily torn or cut particularly that elevated from the upper portion of the isthmus and the operative field is not conveniently reached. Performance is much easier if labor has been in progress six hours or longer because lengthening of the isthmus of the uterus makes a wider field of approach for the surgeon. It is estimated that it requires fifteen to thirty minutes longer to perform than a classical case. Any of the unusual presentations and placental positions are handled as in a classical section.

The chief advantage as pointed out is lowered mortality and lowered primary morbidity. The several responsible factors for these improvements are these. The cervix is more resistant to infection because of its type of tissue, and being notably more accustomed to invasions of bacteria. Rupture or slough has been reported only ten times (Watterwald 3600 cases) post operatively because there is little or no contraction with the after pains and the elastic connective tissue present makes a better suture bed than the purely muscular fundus. These ten cases were handled easily and no death occurred from peritonitis. The position of leakage following this procedure when it does occur makes possible a colpotomy which is simply done and easily drains the infected area. More often it drains spontaneously through the cervix or it may burrow through the skin. One must remember too that the lower abdomen withstands infection better than the upper. The next point of interest is that the incidence of intra-abdominal adhesions is very much diminished by the lower incision and covering it with peritoneum. Other advantages are that the possibility of rupture with subsequent pregnancies is minimized; only five cases having been reported of rupture during subsequent pregnancies and with all of these advantages the test of labor may well be applied to all cases.

Laparotrachelotomy is really a minor change in technique of one of the oldest and certainly the most famous and spectacular of operations. With the exception of trephining the skull it is probably the oldest surgical procedure known



to man and was used first by the Greeks and called by them "Hysteratوماتοke." Probably their use of sections was confined to saving a child immediately after a mother had deceased. It followed other Grecian cultural elements into the Roman Empire where mythology assigned its use in the case of Caesar's birth. For centuries the Romans considered it a matter of good fortune to have been thus born.

Although it has taken unto itself all of the improvements of modern sterility and surgical technique cesarean section has come down through the ages essentially unchanged unless the above depicted change could be considered a distinct alteration of its performance.

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#### R

### Retropharyngeal Abscess As a Cause of Respiratory Obstruction

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Infections of the posterior pharyngeal wall are quite common in childhood, but rarely do these infections go on to pus formation. The upper postnasal space in children is an excellent abode for all types of infection due to the posterior sinus drainage flowing over a soft cryptic mass of obstructive adenoid tissue.

I believe this frequently is the beginning of pyogenic infections of the retropharyngeal space.

The collection of pus in this particular area is probably due to infection of the lymphatic glands, which Wood<sup>1</sup> has described as extending from beneath the pharyngeal mucosa and lying adjacent to the aponeurosis of the tendon and vertebral sheath. These glands drain the posterior nasopharynx and connect directly with the deep cervical chain.

On removal of the adenoids, or pharyngeal tonsil, the lower border of this mass is found to be continuous with the mucous membrane of the pharynx, and, when the curette is forcibly carried under the adenoids, the connection is seen to extend down to the aponeurosis of the tendon and vertebral sheath. Just why infections in this wound should not follow down beneath the pharyngeal mucous membrane I do not know. I have never seen a retropharyngeal abscess follow an adenoidectomy. The free open drainage probably prevents it.

The diagnosis of retropharyngeal abscess should be as easy as that of peritonsillar abscess. The most frequent diagnosis is diphtheria, and most of the cases that I have seen were brought to the Contagious Hospital for isolation. The aphonia and inspiratory and expiratory stridor naturally suggest diphtheria. In my experience, the aphonia is the most constant and reliable symptom, and should always lead to a digital examination of the retropharyngeal space.

Quinsy, which is quite rare in young children, is occasionally diagnosed followed by exploratory incisions (case 1). This operative procedure usually follows the lack of response to diphtheria antitoxin.

A foreign body is next in frequency as an error in diagnosis, and, except that the patients do not cough, it is a fairly legitimate one. An enlarged thymus, that haven of refuge for all doctors who refuse to acknowledge the possibility of any diagnostic error, comes in for its share of abuse in this series of mismanagement.

However, the most frequent cause of error in the diagnosis of retropharyngeal

abscess is due, I believe, to the failure to make a digital examination. It seems as though inspection of the throat should always elicit this condition, but when one remembers the small area of pharyngeal exposure in a short necked baby with a low palate, large protruding tonsils and an active tongue, it is fairly plausible that any bulging mass in the pharynx might be easily overlooked. Also it should be remembered that, when one looks directly down upon an area, it is extremely difficult to recognize any surface elevations. The history is usually of extreme value, and runs about as follows:

Case 1. Baby S. Two weeks prior the baby had a severe head cold and her nose was stopped up. The glands of her neck were swollen, and she had difficulty in nursing on account of her nasal obstruction. There was a slight fever, and she did not appear to be very sick. About a week after she was apparently well, her mother noticed that she could not cry loudly and had much difficulty in nursing. To the mother, the most alarming symptom was her extreme shortness of breath when she cried, and difficulty in breathing when asleep. She could not sleep on her back. Her family physician called several consultants with various diagnoses, and no success.

Her tonsillar fossi were incised for quinsy; she had massive doses of antitoxin, and was sent to Isolation Hospital by her last doctor as a case of laryngeal diphtheria in extremis.

We were prepared to intubate her on arrival, but the picture was not that of diphtheria. She had considerable inspiratory and expiratory stridor on exertion (resisting examination), but when undisturbed there was not the typical intercostal and substernal tugging of diphtheria. She looked tired and exhausted, but was not cyanotic. Her pulse was good.

Examination revealed on inspection a dome-shaped bulging of the pharyngeal wall protruding forward against the base of the tongue and the soft palate. Careful digital examination easily palpated fluid within this tumor. The child was wrapped snugly in a sheet, and her head

was held over the end of the operating table, face down. No anesthetic was used. A sharp pointed hemostat was thrust into the mass, and yellowish-green pus gushed forth which struck the floor with a distinct smack. There were fully one and one-half ounces under marked tension. Immediately the child began to cry loudly. A suction tube was inserted down to, and into, the abscess and drew off considerable pus. The child's head was lowered for a short time, and she was returned to bed.

She took food and fluids freely, and, except for a suppurative otitis media, which developed ten days later and ran a mild course, her convalescence was uneventful. There was no postoperative treatment, and no return of obstructive symptoms.

Case 2. B. W., 20 months old, first had trouble in swallowing in the early part of August, 1925. He had two degrees of fever and was irritable. There was no respiratory distress. A few days later his mother noticed that he cried when his head was turned from side to side. This condition lasted for a month, during which time he had short intervals of a moderate fever.

Six weeks from the onset of his trouble he suddenly developed extreme difficulty in swallowing, water ran out of his nose when he drank, and he had considerable respiratory distress. His mother became alarmed and took him to the hospital, at which time I first saw him.

He was in a good state of nutrition, and, although having trouble in breathing on account of an apparent obstruction in his throat, there was no cyanosis or substernal retraction. His cry was muffled. There was no cervical adenitis or cellulitis of the neck, although he cried when his head was turned. The throat examination revealed a bulging mass, a little to the left of the midline, lying upon the hypopharynx. It was the size of an unhulled walnut and was capped with a yellow dome. On incision yellow pus welled forth. The child began to cry lustily and made a prompt recovery.



Case 3. A retropharyngeal abscess may be confused with a cervical Pott's disease, as illustrated by the following case:

A. S., aged 6 months, was brought to Isolation Hospital on account of difficult breathing. Cultures for Kleb-Löffler bacilli were negative, and roentgen-ray pictures were made of the cervical vertebrae. These pictures outlined distinctly a retropharyngeal abscess extending from the first to the third cervical vertebrae. Although the roentgenologist stated the bone details could not be made out, on account of the age of the patient, yet he was inclined to believe with the intern, that this was a tuberculous lesion involving the body of the third cervical vertebra.

When I first saw this child there was a fluctuant bulging mass, about one inch in diameter, on the posterior pharyngeal wall. When opened with a hemostat pus, under pressure, welled forth and the child promptly recovered. I could see no particular reason why this lesion should have been tuberculous, yet the x-ray did clearly outline the encapsulated abscess, and, I believe, should be used as an adjunct in the diagnosis.

Case 4. While retropharyngeal abscess is most frequently diagnosed as laryngeal diphtheria, yet the reverse can also be true, as cited in the following case:

I was called to see a five year old girl with instructions to open a retropharyngeal abscess. She had had a severe head cold of one week's duration, and then developed difficulty in swallowing, aphonia, and both sides of the neck were markedly swollen. On examination I found that she had a nasal diphtheria with membrane extending over the margins of the soft palate and along either pharyngeal wall. The most alarming finding was the cellulitis of her neck, which was of three day's duration and had gotten progressively worse. This so-called, "bull-neck" type of diphtheria has been, in my experience, almost one hundred per cent fatal, regardless of any form of treatment. It proved to be no exception in this case, although the local symptoms entirely cleared up. The child

was kept quietly in bed, yet she died suddenly from diphtheritic cardiac failure four weeks after hospitalization.

Case 5. This case illustrates the fact that a retropharyngeal abscess may result fatally. On January 31, 1930, a five month old baby was brought to St. Luke's Hospital from a neighboring town on account of difficult breathing and inability to swallow fluids. The child had been ill ten days and had become progressively worse. Several times, while on the way to Kansas City, the parents thought that the child was dying.

When I first saw the baby she had the characteristic position of a retropharyngeal abscess; that is, the head was held fixed instead of moving about as in laryngeal obstruction, but there was no intercostal or substernal tugging. Without any anesthetic the child was wrapped in a sheet, turned on her face, and a mouth gag was inserted. A bulging, soft mass filled the entire pharyngeal space. When opened with a sharp pointed hemostat, considerable pus drained out, and this was followed by rather free bleeding. She breathed freely and I advised her parents that she would soon be all right.

Thirty minutes later my intern called me to say that the child was dead. The nurse had called him on account of free bleeding from the mouth and nose, which seemed to strangle the child. Although no necropsy was performed, I am convinced that this patient drowned from the hemorrhage coming from the retropharyngeal abscess.

#### COMMENT

Retropharyngeal abscess is, in about ninety per cent of cases, a disease of infancy. It is usually preceded by nasal cold, and is secondary to an infection of the adenoids. The early symptoms are fretfulness, of unexplained origin; aphonia; and difficulty in swallowing. The absence of respiratory distress is the differential diagnostic point between it and laryngeal diphtheria. Palpation is an important diagnostic procedure. An x-ray picture should be made to differentiate a cervical Pott's disease from a foreign body.

These abscesses should be drained and not allowed to rupture spontaneously, as the child might die from strangulation. A general anesthetic should never be used. Drainage should be done slowly, with the child held face downward, as the pus is often under pressure, and, if drained too rapidly, large quantities may be inspired. A suction apparatus should be continuously used during the operative procedure, and it is often advisable to use two suction pumps simultaneously.

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### Letter from a Kansas Doctor to his Son

JOHN A. DILLON, M.D., Larned

My dear Boy:

Thanks for the long letter. When we receive an unusually nice, long letter I always read it with pleasure, tempered with apprehension as quite often near the close of such a letter I find the Ethiopian. In this case you wish to join a certain fraternity and mention a few of the national characters who have graced this organization.

In my college days we had no problems of this kind. Later they sprang up like mushrooms with Greek and Chinese names at almost every school in the land. Some were poor, some rotten and some good. I understand they have improved in the past few years and quite a number go through a full semester without being padlocked. They tell me the initiatory ceremony is a very impressive affair in most of them and the "pledge" who can steal twelve pullman towels or a baby grand piano is accorded high honors.

I said I never joined a fraternity and did thrilling things, but truth demands that I be frank with you. When I was your age I was an active member of the Woodmen, wore a brilliant suit and carried a wooden axe around at the annual picnic and to the neighboring towns when opportunity presented. For quite a time I greeted Brothers of the lodge with a mysterious grip and an understanding smile. I quit the axe and uniform when I joined the town band. I

also belonged to the volunteer fire company and swung a fleet-foot on the hose cart at competitive firemen tournaments. Later, after joining more pretentious orders that permitted ostrich plumes and swords, and more hair-raising obligations, I became snobbish and repudiated my humble first love. And when finally my insurance rate was raised from 80 cents per month to \$8.35 I felt abused and deliberately forgot all the grips and pass-words. I also joined many of the social organizations of animal extraction such as the Elks, the Moose, Eagles, Muskrats, etc. These were all creditable orders, meant to uplift the community and incidentally to tap an eight-gallon keg of cold beer every first and third Wednesday nights of the month. I believe many of these societies are still functioning in certain cities, but Brother Volstead certainly did inestimable damage to many lodges in small towns and threw many people out of employment, who went about organizing and reorganizing animal clans every fall.

So while I can never hope to be a Ki Yi-Yi or a Gamma Hoopsilon, there is no justice in advising against your embracing this faith. I am inclined to think you will lay the axe away even sooner than I did, but honestly, Boy, I am sure you will enjoy the companionship and association with your brother members and they will enjoy you. While I am not especially relishing the disgorging of the fifty dollars to close this ceremony, still it doesn't hurt as much as my complaint would indicate. Here is another secret—nearly all fathers get a thrill out of giving their boys money for things worth while whether in business or pleasure.

Don't worry about Mother and me and in calling us over long distance you will get practically the same service if you do not reverse all the calls. Naturally, I am of a thrifty nature and it makes me nervous to hear you and your Mother holding a protracted conversation at 11 p. m. Still, she enjoys it so much I suppose you had better call her up occasionally.

With love,

DAD.



## TUBERCULOSIS ABSTRACTS

Insomnia is a by-product of our present high-pressure manner of living. Thanks to modern inventions and customs, we are today enabled to enjoy, after a full day's work, another day of recreation which our forebears spent in relaxation or sleep. Normal drowsiness in the evening is fought off in preparation for a night of entertainment. When we finally do retire, sleep will not be successfully wooed. For the tuberculous individual, insomnia is further aggravated by toxemia, discomfort, fear and worry. Yet rest above all things is necessary for his recovery. W. C. Service outlines the causes, effects, and treatment of insomnia in the April, 1931, American Review of Tuberculosis, from which the following abstracts are derived.

### INSOMNIA IN TUBERCULOSIS

Normal sleep is characterized by complete loss of consciousness. The power to make conscious movements wanes first, after which follows the loss of use of the special senses. All voluntary muscles are relaxed, respiration becomes deeper and slower, pulse frequency is lessened, the blood pressure falls, the temperature is lower, secretions are diminished. Of the special senses, hearing is most easily aroused during sleep.

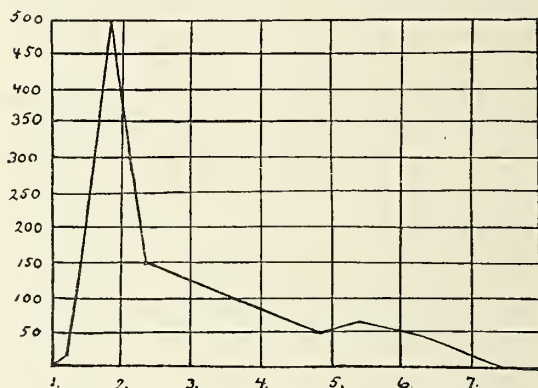
The intensity or depth of sleep increases rapidly during the first two hours and then drops rapidly again, so that by the third hour the sleeper is very near the margin of consciousness, and from that point on the depth of sleep becomes less until awakening occurs.

Insomnia is the inability to secure a sufficiency of normal sleep under favorable conditions. The etiological factors may be grouped under physiological causes, such as pain, dyspnea, cough, pyrexia, gastro-intestinal disturbances, toxic states, etc., and psychological causes such as anxiety, neurasthenia, hysteria, confusional states, and compulsion neuroses. True primary insomnia probably never occurs; every complaint of sleeplessness must be investigated for its cause.

### TYPES OF INSOMNIA

Five general types of insomnia may be easily recognized, as follows:

1. *Complete absence of sleep.* In tuberculosis, this is most commonly seen during a miliary or acute toxic phase with fever and progressive disease. It is usually of short duration, as complete rest tends to lessen the toxemia, which is usually followed by partial insomnia or even natural sleep.



CURVE OF INTENSITY OF SLEEP ACCORDING TO MONNINGHOFF AND PIESBERGEN

The figures along the ordinate show the relative intensity of sleep, measured in milligram-millimeters, expressing the intensity of the sound caused by a falling body necessary to awaken the sleeper. (Modified from Howell's Textbook of Physiology.)

2. *Sleep on retiring for two or three hours and then wakefulness for the remainder of the night.* This condition is more commonly seen in cases of moderate toxemia. After a profound sleep for about two hours, there is a partial return to near-consciousness. The patient may awaken startled, all senses alert, and without the slightest desire to sleep. After a night of wakefulness, early morning may bring a short sleep from fatigue.

3. *Wakefulness for two hours or longer on retiring and finally sleep.* Cases which suffer in this manner are usually the ones who have developed conflicts, especially that of fear. Under the guidance of a sympathetic doctor who understands psychological problems, these patients do extremely well. Fear is an emotion; an emotion is the determining factor of a complex; a complex is an idea plus an emotion. When one complex meets another that is opposed to it, a conflict results. Either a complex or a

conflict is, in itself, quite capable of producing insomnia.

4. *Wakefulness on retiring, sleep for two or three hours, and then wakefulness the remainder of the night.* The group so affected represents a combination of the second and third groups. Their inability to sleep on retiring is due to a development of a fear complex or conflict. The inability to stay asleep may be partly due to neuroses, or in part or entirely to the previous damaging effects of the tuberculous toxin.

5. *Dreams: disturbed or restless sleep.* Patients so afflicted usually complain of having a "restless night." Their sleep may be broken by dreams or they may complain of becoming tired in one position and the frequent changing of position may not give them the restful sleep they desire. A heightened irritability of their nervous centers brings their threshold of sleep very near their threshold of consciousness and it consequently takes only the slightest stimulation to arouse them.

#### EFFECTS OF INSOMNIA

Insomnia affects the body as a whole. After a few restless nights, one notices that the patient is more irritable and complaining than usual. He is restless and finds it difficult to lie in bed. He feels a general lassitude but the nervous irritation prevents relaxation. There is a tired feeling about the eyes and a sense of muscle strain. After several days, extreme tiredness and depression are experienced on arising or weariness may develop a few hours later. Headache may develop in the afternoon, along with sweating, clammy hands, cold feet, and vasomotor disturbances. There may be an increase of fever and of pulse rate. A distressing effect of insomnia is gastrointestinal disturbances. Food seems to lose its flavor, anorexia may become so marked that there is positive loathing for food. Alvarez has described this condition as a purely nervous indigestion and suggests for its treatment psychotherapy, sedatives, hypnotics, and special diets.

#### TREATMENT

Accurate diagnosis is essential. When due to physiological causes, a simple

correction of them is indicated. Some cases will demand systematic study and sympathetic understanding. The patient in bed is not necessarily at rest. During the state of fatigue, the slightest physical or mental exertion must be considered excessive. Progressive relaxation as described by Jacobson, a method designed to teach the patient to overcome "residual tension," is of great value (see "Tuberculosis Abstract," March, 1930).

Hypnotics and sedatives have been much neglected and often misused. Morphine is a good pain reliever but a poor sleep producer. The author has used several somnifacients and finds that each of them has certain advantages under given conditions. He selects four drugs, such as paraldehyde, dial, bromural, and amytol, and uses them in succession but in equivalent dosage. Each drug is given about three times in succession and then another, until all four have been given, after which the process may be repeated. By this method, a variety is obtained and there is slight danger of developing a tolerance, even if continued indefinitely.

Drug therapy is aided by prolonged tepid baths, general massage, and alcoholic back rubs. Warm or hot drinks at bedtime seem to have a soothing effect in many cases. Black eye-masks prevent the patients being awakened by the light in the morning. Reassurance, or the inspiration of confidence, is, of course, necessary. Low protein diet is beneficial in some cases. Fresh air is a simple and useful remedy. In addition, some cases may profit by bromides, suggestion, persuasion, hypnotism, and perhaps by the analysis of Freud, but limitations and objections are common and the gap in therapy is apparent.—*Insomnia in Tuberculosis, W. C. Service, Am. Rev. of Tuberc., April, 1931.*

The American Review of Tuberculosis, edited by Allen K. Krause, is published monthly. It contains authoritative articles on the best tuberculosis work in the United States and Europe and abstracts of articles from publications all over the world on every phase of tuberculosis work. Richly illustrated. A complete cross index of original articles and



abstracts simplifies its use as a handbook for students, physicians, and writers. The editorial staff consists of: E. R. Baldwin, Saranac Lake, N. Y.; Lawrason Brown, Saranac Lake, N. Y.; H. J. Corper, Denver, Colo.; J. A. Myers, Minneapolis, Minn.; Esmond R. Long, Chicago, Ill.; H. R. M. Landis, Philadelphia, Pa.; Henry Sewall, Denver, Colo.

—R—

### The American College of Physicians

The American College of Physicians will hold its Sixteenth Annual Clinical Session at San Francisco with headquarters at the Palace Hotel, April 4-8, 1932. Following the Clinical Session, a large percentage of the attendants will proceed to Los Angeles where a program principally of entertainment will be furnished April 9, 10 and 11.

Announcement of the dates is made particularly with a view not only of apprising physicians generally of the meeting, but also to prevent conflicting dates with other societies that are now arranging their 1932 meetings.

Dr. S. Marx White, of Minneapolis, is President of the American College of Physicians, and will arrange the Program of General Sessions. Dr. William J. Kerr, Professor of Medicine at the University of California Medical School, San Francisco, is General Chairman of local arrangements, and will be in charge of the Program of Clinics. Dr. Francis M. Pottenger, of Monrovia, is President-elect of the College, and will be in charge of the arrangements at Los Angeles. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general and business arrangements, and may be addressed concerning any feature of the forthcoming session.

—R—

### THE NEUROTIC'S LAMENT

W. S. GATES, M.D., Junction City

Oh doctor, doctor, I have a pain.  
To be rid of it, I've tried in vain  
And after what's been done and said.  
I wonder why I am not dead.

The osteopath said it was a bone  
That caused my pain, just it alone.  
He twisted all the bones I had.  
And yet, the pain was just as bad.

The chiropractor said it was my spine.  
With a little adjustment I'd do fine.  
He walked all up and down my back  
But he too was on the wrong track.

The scientist said there is no pain.  
It was only a delusion of my brain.  
They said a prayer, and then they read;  
But I could not understand what they said.

I wrote a letter to the Radio-man  
He said it was my prostate gland.  
But I never knew that a woman had,  
Glands like that that could be so bad.

So doctor, Doctor, I have come to you.  
I want you to look me thru and thru;  
And tell me what causes this awful pain  
That racks my body and tortures my brain.

—R—

### The New Squibb Building—A Symbol of Progress



Nearly 75 years ago, Dr. E. R. Squibb founded a modest pharmaceutical laboratory which was destined to become the modern institution of E. R. Squibb & Sons. Through each succeeding year the business has grown in size because it has grown in service.

In the course of rapid progress new buildings, new methods, new discoveries have constantly supplanted the old.

One of the recent evidences of growth is the new Squibb Building at 745 Fifth Avenue, New York City. Here are installed the executive offices of E. R. Squibb & Sons, in an impressive setting that is in keeping with the modern architectural development of New York City and in harmony with the steady progress of the House of Squibb in the industrial world.

# THE JOURNAL

of the

## Kansas Medical Society

W. E. McVEY, M. D. - - - Editor

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### THEN AND NOW

From stories related by older practitioners and from stories written by laymen concerning pioneer doctors, one gets the impression that in the early days the collection of a fee was only an incident in the practice of medicine—an incident the importance of which might be magnified by the immediate or most pressing needs of the doctor's family or some particular requirement in his equipment. Any of those men that had enough money or enough credit to keep his family fed and clothed was fortunately situated, and one who was able to accumulate a little surplus was especially favored. From these stories one gets the impression that the doctors concerned themselves very little or none at all with the prospect of remuneration for the services they rendered under the most unfavorable conditions imaginable. There is nothing in any of these stories or in any of the records available that even suggests that the practice of medicine was ever a commercial venture.

But those old timers were not so different from the practitioners of today. They liked the good things in life and appreciated having the means to get

them as much as men do today, but there were not nearly so many good things to hanker for. Perhaps that is why the possession of wealth was not regarded as much of a virtue in those days. These old timers were ambitious too. They were ambitious for recognition of their knowledge and skill by their confreres. They utilized the knowledge and facilities available to them to excellent purpose in the treatment of disease. If a practitioner of today can imagine how he would be handicapped without any knowledge of bacteriology, without a suspicion of asepsis, without any information as to the chemistry of the blood or the blood changes, without the roentgen ray and many other modern aids, he will perhaps understand how really efficient those old timers were. From the information to be had one may conclude that the end toward which the practitioners of a hundred years ago were striving was the cure of disease. From the attitude of the profession now one might conclude that the practice of medicine is a means to an end; the end being the accumulations of wealth. In other words there were a few of those pioneer doctors who made a business of the practice of medicine and there are a few modern practitioners who do not.

One may wonder if those old timers who did not know how to put the practice of medicine on a business basis would have been happier or more efficient if they had received a salary from some governmental source. One can hardly think so. It is certain they would have been neither if they had been in the least restrained or restricted or handicapped by official red tape or by regulations that left them no room for the exercise of individual judgment.

### THE VALUE OF MEDICAL OPINIONS

Either the medical profession greatly underestimates its influence with the



people or a considerable number of successful business men greatly overestimate the value of medical opinions. It must have cost the manufacturers of a certain brand of cigarettes at least fifty thousand dollars, very likely twice that much, to secure a sufficient number of letters of commendation to justify launching an advertising campaign the dominant feature of which is the statement that so many thousand doctors have said that this cigarette is less irritating to the throat than other brands.

A few hours spent in listening to radio announcements will convince any one that a great many manufacturers of a considerable variety of products still believe that the public puts a great deal of trust in the opinions of the medical profession. They seem to be capitalizing what we give away very freely and if current reports can be relied upon these venturesome speculators have profited considerably from their investments.

If the public knew how these letters of endorsement had been secured their advertising value would probably be lost. It is not implied, however, that there are doctors who would sell their opinions for a carton of cigarettes nor is it implied that a manufacturer would attempt to secure them in that way. The doctors were asked to try the cigarettes and give their honest opinions as to the irritating qualities, and there is no doubt that the doctors did give their honest opinions. They did not, however, convey to the manufacturer the right to use them for advertising purposes. The impression was given that these were medical opinions while in fact, though they were given by medical men, they were of no more value than an equal number of opinions given by men in other occupations who may have smoked a few of these cigarettes. Quite recently samples of a very excellent brand of coffee have

been sent to doctors with a request for opinions as to its harmless effects. Any opinion based on one man's personal trial, either of tobacco or coffee, is only of value in estimating its effects upon himself. The fact that he finds no disturbing effects from drinking it does not justify him in saying that it would be harmless to another person. There is no benefit to the public from this sort of a campaign and there is no reason for members of the medical profession to encourage them.

#### THE NEW MAGAZINE

It is expected now that the first number of "Folks," the new popular health magazine, will be ready to mail by August 1. The material required for it is in hand and will be put in type immediately.

There are still a few that have not yet sent in the list of people to whom they would like to have the magazine sent. Only five thousand copies will be printed and if you want your clients to have the first number send in your lists.

We will be able to use a considerable number of short articles and we expect the members of the Society to contribute them. They will be printed under the author's name. If you know something you think the public ought to know, or if there is something you would like to tell the people, this is the medium through which you can do so.

The publication of this magazine is the most important step the Society has ever taken. It should be a successful venture, but its success will depend upon the interest the members take in its development.

#### OFFICERS, KANSAS AUXILIARY

At the annual meeting of the Auxiliary in Manhattan, the following offi-

cers were elected: President, Mrs. C. B. Van Horn, Topeka; President-elect, Mrs. E. C. Duncan, Fredonia; Vice President, Mrs. J. F. Hassig, Kansas City; Secretary, Mrs. E. J. Nodurft, Wichita; Treasurer, Mrs. W. G. Emery, Liberal.

### R CHIPS

In a series of thirty-one cases of sterility in males caused by bilateral epididymitis, Hagner reports nineteen cures by the operation of vaso-epididymostomy (*Surgery, Gynecology and Obstetrics*, February, 1931). Thirteen of the nineteen cases induced pregnancy. The operation differs very slightly from that introduced by Martin some years ago and which failed on account of cicatrization at the site of anastomosis. Hagner uses silver wire for sutures. Spermatozoa may not reappear in the semen for as long as nine months. If after that time no spermatozoa are found the operation can be repeated if the remaining vas is long enough.

Since the malarial treatment of paresis is now generally approved there is considerable interest in theories of how the results are brought about. In the *American Journal of Syphilis*, July, 1930, Freeman reported some studies to determine if there resulted from the malarial treatment an amelioration of syphilitic pathology in non-nervous tissue as well as in the brain. He did not find this to be so, but did find the manifestations of syphilis elsewhere than in the nervous system were more pronounced in those cases that responded clinically to malaria. He also found that malaria has no effect on primary or secondary syphilis. He thinks the explanation does not lie in the heat theory but that the spirochetes protect themselves by making nests in fibroblastic tissue. The brain is poor in this tissue and the spirochetes therefore have little protection and are washed out of the brain by the forced drainage caused by the fever.

Cunningham, in the April number of *Archives of Internal Medicine* reports a study of the histories of 12,530 young women who entered the University of California between 1920 and 1929. One-

third of these had had operations for the removal of tonsils, one-third were thought to have normal tonsils, and one-third had pathologic tonsils of some type. The group with normal and the group with pathologic tonsils showed an insignificant difference in the incidence of the contagious diseases of childhood and the commoner diseases of adults. The group with absent tonsils gave a history of higher incidence of all illnesses and operations than did either the group with normal tonsils or the group with pathologic tonsils. The histories did not indicate that the removal of tonsils had much if any influence in lessening susceptibility to most infections. His final conclusion is: "A review of the literature relative to the effect of the condition of the tonsils on general health reveals a great lack of accurate information on the effect of tonsillectomy, when one considers the number of operations that have been performed. Opinions as to the indications for, and the value of, tonsillectomy vary widely. There is a growing tendency to question the value of tonsillectomy as a prophylaxis against infectious diseases and as a preventive measure or cure for such systemic diseases as rheumatism, chorea and carditis."

Since intravenous therapy is so popular and is being so universally used in a great variety of pathologic conditions some carelessness is perhaps to be expected. However, there are reactions and quite severe reactions that cannot be explained as due to carelessness on the part of the operator. In the February number of *Archives of Internal Medicine* Hershfeld, Hyman and Wanger have a paper on "Speed Shock" in which they report a series of experiments on animals which were conducted to determine if the speed of intravenous injections might be responsible for these reactions. A large number of substances were used and in various strengths and amounts. Practically no reactions were observed when the injections were given slowly. Slow injections, however, followed by rapid ones usually resulted in reactions of typical form. They found they could easily produce reactions by



rapid injections. But why? There were conditions that suggested some injury to the liver. When the liver was removed no reactions could be produced even by rapid injections. Their theory is that in some way the liver cells are damaged by the rapid injections and that some toxic substance is released. The problem still seems far from being solved. What shall be regarded as a slow injection, is a question about which there seems to be many opinions. Some clinicians seem to regard 30 to 40 c.c. per minute as slow but the above writers suggest that 3 c.c. per minute when more than 100 c.c. is to be given and 1 c.c. when less than that amount is to be given, is about the right speed. That is probably slower than is practiced by most clinicians and yet they do not always get reactions. It seems that there is still a great deal to learn about this matter and until it is better understood some caution should be used.

The apparent cure of a severe case of agranulocytic angina by the administration of antistreptococcic serum is reported in the June number of the U.S.V.B. Medical Bulletin by Dr. Henry A. Dykes, clinical director and M. T. Moorehead, pathologist of the United States Veterans Hospital at Kansas City. The case was treated at the hospital for about three months before the agranulocytosis was discovered. The sinus disease for which he had been admitted had apparently cleared up. On account of a four plus Wassermann finding he had been under a mixed treatment for more than two months without any marked effect upon the Wassermann reaction. Three months after admission a differential blood count revealed the absence of polymorphonuclear cells. Shortly after this, about ten days, an intravenous injection of neosalvarsan was administered. On the fifth day following there was marked infection of the gingival tissue. Smears showed Vincent's fusiform bacillus and spirochete and culture showed a hemolytic streptococcus. Blood cultures were negative. At this time irrigations of the antrum returned clear. Neosalvarsan was discontinued. The condition of the throat and his general condition grew rapidly worse so that by

February 21, thirty days after the finding of the agranulocytosis, "he was irrational and in extremis, with temperature 105 F., pulse 144, respiration 40, and an extensive, progressive, destructive, ulcerative, and gangrenous condition of the mouth, palate and throat, which seemed to preclude all possibility of recovery." On February 22 the subcutaneous administration of antistreptococcic serum was begun, with an initial dose of 10 c.c., this was increased slightly and repeated at intervals of from two to four days. Improvement was observed almost at once. Granulocytes reappeared on February 24 and rapidly increased until on February 27 they were 37 per cent and on March 3 had reached 79 per cent with a total white count of 22,700. The lesions in the throat healed rapidly and completely.

#### DEATHS

Frank L. Abbey, Newton, aged 70, died June 25. He graduated from the College of Physicians and Surgeons, Kansas City, Kansas, in 1897. He was on the staff of Axtell Christian Hospital. He was a member of the Society.

William M. Earnest, Washington, aged 63, died in Altadena, California, April 7, from bronchial asthma and heart failure. He graduated from American Medical College, St. Louis, in 1892. He was a member of the Society.

#### SOCIETIES

##### REPUBLIC COUNTY SOCIETY

A meeting of the Republic County Medical Society was held in Belleville, Thursday, April 16.

The program consisted of a lecture by H. P. Boughnon, M.D., Kansas City, Missouri, on "Acute Respiratory Diseases."

##### BOURBON COUNTY SOCIETY

The Bourbon County Medical Society met in regular session at the Library building, May 18, 1931, at 8 p. m., with Dr. R. Y. Strohm in charge.

After a short business session the time of the meeting was given to four very interesting and profitable papers. Dr. Eugene P. Hamilton of Kansas City

read a paper on "Diagnosis and Surgical Treatment of Gall Bladder and Liver Diseases." Dr. O. F. Bradford of Kansas City gave a paper on "Pediatrics of the Summer Months." Dr. H. E. Thomason of Kansas City gave a paper on "Sinus Infections" and Dr. L. P. Warren of Wichita gave a paper on "The Causes of Deafness." The meeting was well attended in spite of bad weather conditions and we were glad to have several visitors from neighboring medical societies with us. All agreed that the meeting was one of the best they had attended for some time. Meeting adjourned.

R. L. GENCH, Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Clay County Medical Society was held in the DeBuche Hotel at Wakefield on the evening of June 10. Those in attendance were the guests of Dr. D. O. Jackson at dinner at the hotel. Fourteen members and five visitors were present. The visitors were: Majors Sima and Hill; Lieutenant Sima, Fort Riley; Dr. Henry D. Smith, Washington, Kansas, and Harry M. Gilkey, Kansas City, Missouri.

Following the dinner the meeting was called to order by the President. After a short business session the president introduced Dr. Gilkey who gave a very interesting and instructive illustrated talk on a number of pediatric cases that had been under his observation and care.

Dr. Gilkey and Major Sima were elected to honorary membership in the society. A vote of thanks was given to Dr. Jackson for the excellent dinner.

F. R. CROSSON, Secretary.

#### FRANKLIN COUNTY MEDICAL SOCIETY

The regular meeting of the Franklin County Medical Society was held May 27 for the first time at the new Ransom Memorial Hospital. In honor of the occasion, invitations were sent to all the physicians of Douglas, Miami, Anderson, Allen and Osage counties to join with us. About sixty were present to make an inspection trip through our new hospital, and enjoy the "Dutch" lunch which was

provided by the hospital, with the drinks and cigars furnished by the Medical Society.

At 8:00 p.m. the meeting was opened with the reading and approval of the minutes. Dr. G. G. Kreeger, President, then read a paper expressing the appreciation of the physicians to all of those who had helped make the Ransom Memorial Hospital possible. Mr. J. H. Springer responded for the county commissioners and Mr. Frank Miller for the hospital trustees. The physicians and guests were then privileged to hear two of the best papers ever given before our society. Dr. L. P. Engel of Kansas City discussed the "Pre and Post-operative care of Surgical patients." This was a well planned common-sense article which if followed more closely would certainly lessen mortality and ease the period of convalescence in many cases.

Dr. Frank R. Teachenor gave a very lucid description of the "Diagnosis and Treatment of Head Injuries." His paper should certainly inspire every physician present to give his head injury cases a much better plan of treatment than heretofore.

After some discussion the meeting adjourned at 9:55 p.m.

HOBART K. B. ALLEBACH, Sec.

June 24

The Franklin County Medical Society held its regular monthly meeting at the State Hospital at Osawatomie as guests of Dr. F. A. Carmichael and staff.

The new building was inspected by the members. A fine dinner was then served, which was enjoyed by all present.

The meeting opened at 8:20 p. m. with a reading of the minutes of the previous meeting which were approved.

Dr. Carmichael after a few remarks about an interesting case of ischemic paralysis, introduced Dr. E. C. Padgett of Kansas City who showed a series of lantern slides, showing types of skin grafts and various plastic operations. Dr. H. R. Wahl, also of Kansas City, gave an interesting talk on Pathology of the Gall Bladder. He showed slides of microscopic changes and several gross



specimens showing gall bladder pathology. The meeting closed at 10:15 p.m.

HOBART K. B. ALLEBACH, Sec.

#### DECATUR-NORTON COUNTY SOCIETY

The regular meeting of the Decatur-Norton County Medical Society was held at the Commercial Club rooms in Norton, Kan., on June 3 at 2:30 p.m.

Program—2:30 p.m., business session. 1—"Newer Applications in Local Anesthesia", Dr. F. D. Kennedy, Norton, Kan. 2—"What the Eye Can Tell Us of General Disease," Dr. Edwin N. Robertson, Concordia, Kan. 3—"Acidosis," Dr. Wm. C. Lathrop, Norton, Kan. 6:00 p.m.—Dinner at the Kent Coffee Shop.

#### CENTRAL KANSAS SOCIETY—GOLDEN BELT SOCIETY

A joint meeting of the Central Kansas Medical Society and the Golden Belt Medical Society was held at Hays, July 2, at St. Anthony's Hospital.

The program began at 3:00 p.m. and consisted of the following papers: Moderate and Minor Brain Injuries, by Dr. M. J. Owens, Kansas City; Acute Respiratory Infections, by Dr. H. P. Boughn, Kansas City; Congenital Hypertrophic Pyloric Stenosis, by Dr. E. G. Padfield, Salina. Dinner was served at the Lamer Hotel.

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### Proceedings of the Seventy-third Annual Meeting of the Kansas Medical Society—Concluded

#### STANDING OF COUNCIL

District	Councilor	Term expires
1st.....	L. W. Shannon, Hiawatha.....	1933
2nd.....	L. B. Spake, Kansas City.....	1933
3rd.....	E. C. Duncan, Fredonia.....	1934
4th.....	O. P. Davis, Topeka.....	1932
5th.....	J. T. Axtell, Newton.....	1932
6th.....	J. F. Gsell, Wichita.....	1934
7th.....	C. C. Stillman, Morganville.....	1933
8th.....	Alfred O'Donnell, Ellsworth.....	1933
9th.....	H. O. Hardesty, Jennings.....	1932
10th.....	I. B. Parker, Hill City.....	1934
11th.....	C. H. Ewing, Larned.....	1932
12th.....	W. F. Fee, Meade.....	1934

Dr. O. P. Davis withdrew the amendment to the by-laws which was offered at the previous meeting of the House of Delegates and immediately submitted it again for consideration at the meeting of the House of Delegates in 1932 with the

following amendment to the Constitution, Article 7, Part 3—after the word, "Treasurer" insert the words "all ex-Presidents."

On the first morning of the General Session following the President's Address, a motion was made by Dr. O. P. Davis regularly seconded and carried that the Secretary appoint a committee of three to study the President's recommendations and report to the House of Delegates. The following committee was named: Dr. J. F. Gsell, Dr. L. F. Barney and Dr. F. A. Carmichael.

Dr. Duncan's recommendations:

1. I want to recommend the Health Pamphlet proposed by Dr. McVey.
2. Lease time on WIBW or some other radio station for one-half hour each week day except Sunday from 12:30 to 1 p. m. if possible.
3. Affiliate with the State Chamber of Commerce.
4. See that every eligible physician in Kansas is an active member of this society.
5. Remember the slogan of the third group of railroad men, fight.
6. Let us be a compact, cohesive organization not afraid to use our organization's power in state politics and remembering it is the State and not the National Government that we should look to.

7. It should not be hard to convince the hard-headed business men who head the railroads, insurance companies and giant corporations that it is for their good to have their employees and customers looked after by a living, fighting, progressive medical profession.

8. Closer co-operation with state and county health departments, and with certain other selected agencies having to do with the public health.

9. I believe a health column in our large papers, sponsored by such an important unit of organized medicine as the Kansas Medical Society, would be more popular with more people than the column of any individual and I say this without detracting in the least from present writers. I recommend this society take such steps as are necessary

and approved by this society, for the completion of this idea.

The committee's report:

1. Your committee feels this is a worthy experiment and would recommend that the money appropriated for the Bureau of Public Relations activity be concentrated as a major activity towards its establishment.

2. Your committee believes that medical talks over the radio would be desirable and feasible, providing the cost is not prohibitive, and that properly arranged and timed programs are secured and supervised by a special committee.

3. We heartily endorse this recommendation and suggest that six memberships be secured in the State Chamber of Commerce to be paid for from the General Fund. The memberships to be placed where most effective by the Public Relations Committee.

4-5-6-7-8. The committee heartily endorses the sentiments of these paragraphs and recommends them for favorable consideration.

9. The committee feels that the recommendations in this paragraph may have far reaching possibilities and recommends that this item be referred to a proper committee for active development.

Respectfully submitted,  
(Signed) J. F. GSELL,  
L. F. BARNEY,  
F. A. CARMICHAEL.

Dr. Geo. M. Gray made a motion that the report of the committee be adopted, which was regularly seconded and carried.

A motion was made that the chair appoint an Auxiliary Committee, which was regularly seconded and carried.

The following were named:

Dr. C. B. VanHorn, Chairman, Topeka.  
Dr. J. T. Axtell, Newton.  
Dr. W. G. Emery, Hiawatha.  
Dr. E. C. Duncan, Fredonia.  
Dr. J. F. Hassig, Kansas City.

Mr. F. B. Thomas, Field Director of the State Chamber of Commerce, made a short talk on the object of his organization and advantages to be gained by membership.

Dr. Geo. M. Gray made a motion, which was regularly seconded and carried, that \$2,000.00 be appropriated to the Bureau of Public Relations for the ensuing year and that \$150.00 be used for memberships in the Kansas State Chamber of Commerce, the balance \$1,850.00 be used for the purpose of promoting a health magazine under the control of the Bureau of Public Relations Committee.

Dr. C. C. Nesselrode made a motion that was regularly seconded and carried that the President appoint a committee of five for the ensuing year to be known as the "Committee on the Control of Cancer" and that Chapter 9, Section 1 of the By-laws be changed to make this one of the standing committees, which will come up for final action at the House of Delegates in 1932. The following were named:

Dr. C. C. Nesselrode, Chairman, Kansas City.

Dr. W. M. Mills, Topeka.

Dr. Alfred O'Donnell, Ellsworth.

Dr. R. W. Hissem, Wichita.

Dr. H. L. Snyder, Winfield.

Dr. H. L. Chambers, Chairman of the Student Loan Committee, offered the following amendment to the Constitution:

It is proposed to amend the Constitution of the Kansas Medical Society by adding the following:

Article XVII—Medical Student Loan Fund.

Section 1—This act is intended to establish a loan fund and to provide for the administration of the same.

Section 2—Subject to the checks and safeguard set out in the other portions of this act, any funds belonging to the Kansas Medical Society and not otherwise appropriated or hypothecated may be so loaned, and in addition, there may be loaned from The Medical Defense Fund any amount such that the total of such loans shall not exceed twenty per cent of itself.

Section 3—These contemplated loans will be made only to Junior and Senior students in the Medical School of the University of Kansas and of such only to males who are twenty-one (21) years of age or older, who are legal residents



of Kansas, and then only to those having the Bachelor's degree in Arts or Sciences.

Section 4—Not more than one hundred twenty-five dollars (\$125.00) shall be loaned to a given student in a single semester and in no case shall the total amount loaned to any one student be in excess of five hundred dollars (\$500.00).

Section 5—The borrowing student must show himself of good moral character, in sound physical health, and must carry, through the loan board, sufficient life and health insurance in favor of the Kansas Medical Society to protect it against loss from disease, accident, or death incurred by him.

Section 6—Each application must be sponsored and recommended by at least one member of the faculty of the Medical School, rating Associate Professor or better, and must also be approved by the Dean of the Medical School.

Section 7—(a) Interest on these loans will be paid at the rate of three per cent (3%) per annum, payable semi-annually, and no loan will be made to one who is in arrears on his own interest payments.

(b) No note will be taken for a period of more than four (4) years nor for a due date more than two (2) years and one (1) month beyond the student's graduation date. If the note is not paid at maturity, the interest charge will be ten per cent (10%) per annum, payable semi-annually, from the due date on to continue until all is paid.

(c) Each borrower will pay in addition to the regular interest, whatever amount is necessary to carry the required insurance, and such insurance will be carried during both the three per cent (3%) and the ten per cent (10%) periods.

(d) In the event that the interest or any part of it becomes overdue at any time, or the insurance premiums get in arrears, then the whole amount shall be due and subject to immediate collection at the discretion of the Loan Board.

(e) The notes contemplated may be paid or reduced at any interest paying date at the option of the borrower.

Section 8—As soon as practicable after the adoption of this amendment,

the President of the Kansas Medical Society shall appoint two suitable members, one for service of two (2) years, and one for a service of three (3) years, who, after confirmation or approval by the councilors, shall with the Chairman of the Medical Defense Board constitute a Loan Board and function as such. As terms of appointment expire, subsequent presidents will reappoint or appoint others for these positions, each for a period of three (3) years. Similarly, when vacancies are caused by death, resignations, disease, removal, or the like, the President will fill them by interim or unexpired term appointments which will be approved or disapproved at the next following meeting of the councilors. No disapproved appointee will be eligible for consideration for a period of at least three years beginning with the date of such disapproval.

Section 9—One of the appointees to the Loan Board will be its President, the other will be its Secretary, but the board itself will decide on the personnel of its organization.

Section 10—The judgment of the Loan Board shall be final as to the total of loans made, total loaned to any one applicant, the desirability of loaning to any certain applicant, and the like, but in no case shall any one man borrow more than a total of five hundred dollars (\$500.00) nor more than one hundred twenty-five dollars (\$125.00) in any one semester, nor shall the total loaned from the Medical Defense Fund ever exceed twenty per cent (20%) of itself.

Section 11—The Loan Board will serve without remuneration but it may apply to the Secretary of the Kansas Medical Society for postage and such stationery and other printed matter as he and the board may agree that it needs. The Secretary is hereby authorized to supply such needs and report the expense along with similar expense of his own office.

Section 12—The Loan Board will work out and keep in operation a system of blanks, forms, and records for the proper functioning of this act, will keep accurate records of the business done or considered, will keep complete informa-

tion about loans made, interest on loans collected, etc., and report the same through the Secretary of the Kansas Medical Society at its annual meeting. The actual notes given by borrowers will be put in the custody of the Treasurer of the Kansas Medical Society who will cover them and their condition in a separate paragraph in his annual report.

Section 13—All sections and parts of sections in conflict with this act are hereby repealed in so far as such conflict interferes with its proper functioning.

(Signed) H. L. CHAMBERS, Chairman.

GEO. M. GRAY,

L. G. ALLEN.

The following amendment is offered to Article XIII, Section 2 of the Constitution, that after the words "Defense Fund" in the seventh line, page 9, the words "Medical Student Loan Fund" be added.

Dr. L. F. Barney presented the following resolution:

Whereas, The 1931 annual meeting of the Kansas Medical Society has been one of the most successful in its history; and

Whereas, The success of the meeting has been so dependent upon the satisfactory meeting place, the adequate accommodations and the generous entertainment provided and the real Kansas hospitality extended; therefore be it

Resolved, That the House of Delegates now assembled express its gratitude to the members of the Riley County Medical Society, the Chamber of Commerce, and the good people of Manhattan by a rising vote of thanks and, be it further

Resolved, That a copy of this resolution be spread on the records of the Society and copies be sent the Riley County Medical Society, the local press and the Chamber of Commerce.

Dr. J. F. Hassig made a motion that the President, Dr. E. C. Duncan, and Dr. C. C. Nesselrode escort Dr. P. S. Mitchell, President-elect to the General Session for introduction.

Meeting adjourned.

#### JOINT MEETING OF COUNTY SECRETARIES AND COUNCIL

This meeting was held Tuesday, May 6, at 12:15 p. m. in the Crystal Dining

Room of the Wareham Hotel, Dr. J. F. Hassig presiding. The following were present: E. C. Duncan, Fredonia; H. J. Stacy, Leavenworth; H. E. Haskins, Kingman; D. E. Bronson, Olathe; H. E. Robbins, Belleville; B. A. Nelson, Manhattan; H. A. Mercer, Arkansas City; J. A. Dillon, Larned; P. S. Mitchell, Iola; O. P. Davis, Topeka; J. F. Gsell, Wichita; H. O. Hardesty, Jennings; C. C. Stillman, Morganville; I. B. Parker, Hill City; Alfred O'Donnell, Ellsworth; Geo. M. Gray, Kansas City; W. E. McVey, Topeka; J. F. Hassig, Kansas City.

Short, snappy and interesting talks pertaining to the betterment of county societies were made by the following doctors: E. C. Duncan, B. A. Nelson, O. P. Davis, Earle G. Brown, H. E. Robbins, J. F. Gsell, W. E. McVey, H. E. Haskins, Alfred O'Donnell, H. A. Mercer, J. A. Dillon, and P. S. Mitchell.

Meeting adjourned at 2:00 o'clock in order to attend the General Session.

#### COUNCIL MEETING

The newly organized Council met May 7 at 11:00 a. m. in the Grill Room, basement, Wareham Hotel. The meeting was called to order by the President, Dr. E. C. Duncan.

By a unanimous vote the meeting place for the 1932 annual meeting was decided to be held at Kansas City, Kansas, a three day session, Tuesday, Wednesday and Thursday, May 4, 5 and 6, 1932.

Dr. C. C. Stillman was re-elected on the Medical Defense Board for a term of three years.

#### STANDING OF DEFENSE BOARD

Dr. O. P. Davis, term expires 1932.

Dr. W. F. Fee, term expires 1933.

Dr. C. C. Stillman, term expires 1934.

#### SECRETARY'S EXPENSE ACCOUNT

Stenographer's Salary .....	\$ 300.00
Stamps .....	72.38
Long Distance Telephone Calls and Telegrams .....	14.62
Miscellaneous .....	12.55
Secretary's Salary for past year 5-1-30 to 5-1-31 .....	1,000.00

Total .....\$1,399.55

Dr. C. C. Stillman made a motion that the amount be allowed, which was regularly seconded and carried.

Dr. O. P. Davis made a motion that the Secretary advise the local committee



that nothing is to interfere with the meeting of the House of Delegates on the first night of the 1932 annual meeting, which was regularly seconded and carried.

#### ACCOUNT OF JOURNAL OF THE KANSAS MEDICAL SOCIETY

May 1, 1930, to May 1, 1931

##### Receipts

Advertising .....	\$4,387.98
Sales and Subscriptions .....	347.46
1,500 Member Subscriptions .....	3,000.00
Other Sources .....	20.00
	<hr/>
	\$7,755.44

##### Expenditures

Printing Journal .....	\$2,628.50
Stock and Stationery .....	845.05
Salaries and Wages .....	2,780.00
Postage .....	201.29
Electrotypes .....	144.96
Office Rent .....	300.00
Office supplies and miscellaneous .....	74.47
	<hr/>
	\$6,974.27

Amount earned .....\$ 781.17

The net advertising receipts for this year were \$470.51 less than last year. Receipts from sales and subscriptions were \$66.79 more while receipts from all other sources were \$138.74 less. The total receipts for this year were \$542.46 less than for last year. It cost \$254.47 more to publish the Journal for the year ending May, 1931, than the preceding year. The printing cost \$36.20 more, the stock \$77.55 more, our help cost \$260.00 more and postage was \$27.56 more. On the other hand we expended \$104.10 less for electrotypes and \$41.94 less for office supplies, express, drayage and miscellaneous items.

We have run 22 pages, or 374 column inches, more of reading matter than last year.

(Signed) W. E. McVEY.

Dr. O. P. Davis made a motion that the report be accepted and placed on file, which was regularly seconded and carried.

Meeting adjourned.

#### GENERAL SESSION

The scientific session convened at 9:45 a. m. in the Ball Room of the Wareham Hotel, Manhattan, Kansas, May 5, 1931, to listen to the previously announced subjects and the discussions thereof as presented by members and guests of the Society.

#### PROGRAM

Tuesday, May 5, 1931

"Address of Welcome"—Dr. J. D.

Colt, Sr., President, Riley County Medical Society.

"Medical Organization, Its Importance"—Dr. E. C. Duncan, President, Fredonia.

"Some Gastro-Intestinal Conditions Observed by the General Practitioner"—Dr. J. W. Helton, Colony.

Discussion opened by Dr. W. K. Johnson, Garnett.

"The Clinical Application and Interpretation of Blood Chemistry"—Dr. John L. Lattimore, Topeka.

Discussion opened by Dr. E. S. Edgerton, Wichita.

"Prognosis Versus Treatment in Pernicious Anemia"—Dr. E. A. Miner, Independence.

Discussion opened by Dr. W. S. Hudiburg and Dr. G. C. Bates, Independence.

"Rational Use of Radium"—Dr. G. W. Jones, Lawrence.

Discussion opened by Dr. E. H. Decker, Topeka.

"The Sinus Problem"—Dr. H. E. Marshall, Wichita.

Discussion opened by Dr. E. D. Carter, Wichita.

"Vitamins"—Dr. J. A. Wheeler, Newton.

Discussion opened by Dr. H. N. Tihen, Wichita.

"Science, Art and Bunk in the Sacred Calling"—Dr. R. C. Hutcheson, Elk Falls.

Discussion opened by Dr. H. E. Haskins, Kingman.

"The Physician and the Community"—Dr. Fred Slayton, Wichita.

"The Present Medical Situation"—Dr. C. D. McKeown, Wichita.

Discussion opened by Dr. H. N. Tihen, Wichita.

#### GUEST DAY

Wednesday, May 6, 1931

(A) "The Operative Treatment of Infantile Paralysis."

(B) "The Value of Unusually Early Operative Treatment in Congenital Hip Dislocation with Description of the Method."—Dr. E. W. Ryerson, Chicago.

Introduction by Dr. F. A. Carmichael, Osawatomie.

"The Bureau of Investigation and Its Work"—Dr. Arthur J. Cramp, Chicago

Introduction by Dr. O. P. Davis, Topeka.

"Practical Problems in the Treatment of Carcinoma of Cervix Uteri."—Dr. H. S. Crossen, St. Louis.

Introduction by Dr. E. S. Edgerton, Wichita.

"A Consideration of Clinical Aspects of Surgical Lesions of the Upper Abdomen."—Dr. E. Starr Judd, Rochester.

Introduction by Dr. C. C. Nesselrode, Kansas City.

"Preventable Invalidism Following Childbirth."—Dr. Jennings C. Litzenberg, Minneapolis.

Introduction by Dr. L. A. Calkins, Kansas City.

"Climacteric and Post Climacteric Symptoms"—Prof. Erwin Von Groff, Vienna, Austria.

Introduction by Dr. Porter Brown, Salina.

Thursday, May 7, 1931

"Skull Fractures and Their Treatment from the Viewpoint of a Country Doctor."—Dr. B. H. Pope, Kingman.

Discussion opened by Dr. H. T. Jones, Lawrence.

"Tribromethylalcohol (Avertin) as a Rectal Anesthetic"—Dr. Lewis W. Angle, Boylan Research Fellow, University of Kansas, School of Medicine.

Discussion opened by Dr. Nelse Ockerblad, University of Kansas, School of Medicine.

"The Present Status of Urinary Antiseptics"—Dr. A. D. Gray, Topeka.

Discussion opened by V. C. Eddy, Colby.

"Painful Points and Problems"—Dr. Edward K. Lawrence, Hiawatha.

Discussion opened by Dr. L. G. Gloyne, Kansas City.

"Treatment of Postoperative Distention"—Dr. Thomas G. Orr, Mission Hills.

Discussion opened by Dr. H. E. Snyder, Winfield.

"The Treatment of Acute Generalizing Peritonitis"—Dr. L. F. Barney, Kansas City.

Discussion opened by Dr. W. M. Mills, Topeka.

"Intestinal Diverticula"—Dr. Alfred O'Donnell, Ellsworth.

Discussion opened by Dr. H. R. Wahl, Kansas City.

"Some Anatomical Studies on Oblique-Inguinal Hernia"—Dr. L. V. Hill, Kansas City.

Discussion opened by Dr. C. C. Nesselrode, Kansas City.

"Methods of Handling Patients Coming Into the State Sanatorium for Tuberculosis"—Dr. C. F. Taylor, Norton.

MOTION PICTURE WITH SOUND

"Sub-Total Abdominal Hysterectomy for Uterine Fibroids"—Dr. H. O. Jones, Professor Gynecology, Northwestern University, Chicago.

Immediately following the "Address of Welcome" by Dr. J. D. Colt, Sr., on the morning of the first day, he introduced the following resolution:

Be It Resolved, By the Kansas Medical Society, assembled at Manhattan, Kansas, in its annual session for 1931, that,

Whereas, Dr. C. F. Little of Manhattan, Kansas, one of the founders of the Riley County Medical Society, is unable to attend the present session by reason of his advanced age of 94 years and consequent physical weakness, and

Whereas, It is the purpose and desire of the members of this body always to pay tribute to whom tribute is due.

Now Therefore, We hereby extend to Dr. C. F. Little the expression of our deepest regard for his sterling character, and our sincerest appreciation of his faithfulness in upholding with honor to the profession its principles of ethics and his high ideals of the confidential relationship of physician to patient, as well as his valuable contribution to the progress of medical science by his association with this society and his medical practice during the long course of his career as a physician and surgeon; be it further

Resolved, That a copy of this resolution be spread upon the minutes of this meeting and a copy presented to Dr. C. F. Little.

Dr. J. D. Colt, Sr., moved its adoption which was regularly seconded and carried.

This meeting was another successful one. Some of the distinguished guests



who had attended other State Medical Meetings this year had many complimentary remarks to make about the excellent program and the large attendance at our sessions. Every essayist on the program was present with one exception and he had a valid excuse.

Too much credit cannot be given to the members of the Riley County Medical Society for the success of the meeting.

J. F. HASSIG, Secretary.

—R—

**Panoramic View of the Woman's Auxiliary to the A. M. A. In Four Articles—  
4 Western District**

MRS. JAMES F. PERCY

As my division in the organization work covers the states of the far West, branching to the middle states only to include Nebraska, this panorama will begin there. We have been enjoined for so many years to "Go West," it has now become a favorite direction of travel.

Nebraska is always up and doing and a survey of activities of 1931, shows an extensive distribution of the National Auxiliary Study Envelope on "Communicable Disease Control;" much welfare work, especially providing professional visiting nurses for public schools in various counties and definite organization of county relief work at a great saving to the county commissioners. Here indeed is a far-reaching benefit for the community-at-large in a practical, economic way. Benefits are held to procure funds for completing files of scientific books and magazines and research work of the pathological laboratory connected with the Sharp Building Library at Lincoln. The Auxiliaries' scientific educational programs contain many important names, these together with social and philanthropic activities keep everyone interested, useful and happy. One new county auxiliary has been reported as a last gift to this administration.

Colorado has kept up the interest aroused during the National Presidency of Mrs. F. P. Gengenbach of Denver, particularly with spreading ideas of good and better health through the use

of literature in the less populated districts. Included with this, Study Envelopes have been used and a greater field developed for approved health programs in other organizations. Growth in numbers has not been sought so much as growth in achievements.

Wyoming must be passed as having been silent to all requests for even a hint as to its status. Geographically, Wyoming and Utah are difficult of organization but within the few years that lie ahead, they are certain to be caught in the vibration already swinging its way throughout the land and they cannot long be resistant to its call, we are sure. Utah has already given expression through her women visiting other states, that she is ready to take action to further a properly organized auxiliary.

New Mexico, with but one county, Bernalillo, organized and far from all centers of activity, has been an inspiration by their efforts to follow the National precepts. Unless one has travelled the great spaces of the deserts of the southwest, no conception of its distances can be formed. This one county has taken up Child Welfare work, sale of Tuberculosis Seals, enjoyed programs from their Medical men, County Charities' Chairman, County Health Nurses and State Director of Public Health and carried the social activities of the State Medical Convention. They are few in numbers, but verily the leaven quickeneth the whole loaf.

Arizona has trebled its units from one to three but has found organization work difficult due to distances. Social features have prevailed unless some definite need has loomed in the offing, such as the Basic Science Bill, for the passage of which the State Auxiliary made great effort. In a state so filled with cults the passing of the bill by the Senate was a real achievement, even though it was finally held up in committee. However, nothing daunted, the members are now aroused to the possibilities and usefulness of an auxiliary and experienced women are stepping forward, willing to serve and assist in making an active worth-while organization.

California has been concerned, aside from organization, with establishing itself upon a permanent foundation through a proper Constitution and has been able to do this with the full support of the California Medical Association, who are printing these Constitutions as a gift to the State Auxiliaries.

At the recent State Meeting, held in San Francisco, April 27-30, 165 women registered, with 55 delegates and 115 women seated at the annual luncheon. The Auxiliary now feels safely established and on its keel.

The keynote of each county report was education but the social side, welfare work, Red Cross, changing the position of a State Senator, creating sentiment for a Tuberculosis Sanatorium, local philanthropies, all had their places with the scientific programs. A chart "The Technique of Following a Bill Through the Legislature" provided a most unique, striking and valuable object lesson of information as to what we are all up against in our legislatures and their procedure. This subject is highly recommended to all organizations.

A resolution was introduced and adopted and directed to the National Committee on the "High Cost of Medical Care," asking for a change in the name under which the committee functions to one more in accord with the facts they are studying, namely: "The High Cost of Illness or Sickness." The original name implies some fault of the medical profession: while the proposed name is inclusive of all the various factors involved in the problem. A copy has been sent to the National Auxiliary asking their indorsement of said resolution at the Philadelphia Convention. The California Medical Association are presenting a similar resolution to the House of Delegates, A.M.A., whose membership now closely approaches 900.

The interest shown and the friendliness in the social life at this convention demonstrated a new order which we hope has come to stay.

Oregon has chiefly concentrated upon organization work and revival of general interest this year, through providing the units with a list of suggested study

topics to encourage a similarity of subjects. Portland has monthly meetings with speakers who use the material contained in the study envelopes and are extending their educational and philanthropic interests as well. Temporary organization in one county is hoped to soon become permanent, thereby increasing their number and justifying the work of the state officers.

Washington is showing great interest to become organized and after considerable correspondence, it has been deemed best to have the primary action come through the State Medical Meeting which takes place soon after the Philadelphia Convention. We feel it is safe to prophesy that Washington will be on the list of organized states for our successor.

Idaho is listed as an organized state but as all letters have remained unanswered the panorama must end here.

To those who were fortunate enough to attend the National Meeting at Philadelphia, no further stimulus will be needed.

Each state will be eager to carry out the aims and ideals of the parent organization.

We learn from those who have achieved, and in Pennsylvania the accomplishments of the Auxiliary together with their complete plan for the National Convention will give a wide understanding of a still greater organization and insure a generally more important recognition in the days to come.

—————R—————

**Training for Medical Reserve Officers at the Mayo Foundation, Rochester, Minn. and Washington University School of Medicine, St. Louis, Mo.**

Through the courtesy of the authorities at the Mayo Foundation, Rochester, Minnesota, and the Washington University School of Medicine, St. Louis, Missouri, arrangements have been made whereby there will be given a period of fourteen days inactive duty training for Medical Reserve Officers without expense to the government. The dates of this training are as follows:

Mayo Foundation, Rochester, Minnesota, October 18-November 1.

Washington University School of



Medicine, St. Louis, Missouri, November 8-November 22.

These courses present to Medical Reserve Officers a two-fold advantage: (a) Medico-military instruction; (b) Refresher course in professional subjects. The courses are so arranged that a Reserve Officer can devote his morning hours in any of the clinics or other purely medical professional studies he desires. The afternoon and evening hours will be taken up entirely with medico-military subjects. The custom of taking annual study courses has become so general among medical men that argument about its advantage is unnecessary. Furthermore patriotic motives of a Reserve Officer in the interest of National Defense and his advancement in the military service have created a desire for periodic instruction in Medical Department Reserve matters. These two great medical centers have provided the ways and means whereby the two-fold purpose can be accomplished.

For the past two years inactive duty training to Medical Department Reserve Officers has been given during the fall months at the Mayo Foundation, Rochester, Minnesota, for a period of two weeks. The authorities of the Mayo Foundation provided the facilities, including instructors, offices, class rooms, etc., necessary to carry on the school. All expenses incurred, except the salaries of the members of the Regular Army were borne by the Foundation. The Washington University School of Medicine have offered the same facilities, including clinical instruction in the various branches of medical practice and the clinical material, laboratories, museums, libraries of the school and lecture rooms without charge. A group of faculty members have volunteered to give instruction and hold clinics during the period of training.

At our first inactive duty training camp at the Mayo Foundation most of the students were Fellows of the Mayo Foundation or otherwise connected with the Mayo Clinic. A few were physicians from other parts of the Corps Area, who profited by having the mornings free to devote to observation of the work of the

Clinic. The attendance at this school for the first year was thirty-three (33). The following fall, 1930, another two weeks period of training was provided with the same facilities as in the previous year by the Mayo Foundation. Fifty-one (51) Reserve Officers received instruction during this training period. The school was originally established because of the difficulty in granting leave to the Reserve Officers at the Mayo Clinic for camp training in July because of the fact that this was the rush season at the Clinic. After conducting two of these camps the authorities at the Mayo Clinic summarized the advantages as follows:

- a. A Reserve Officer in convenient periods of the year receives stimulating personal instruction along military lines.
- b. It provides preparation for taking examination for the next higher grade.
- c. It affords a Medical Officer the satisfaction of knowing he is better fitted for his present rank.

- d. It provides for the combination of military training with a professional observation course at the medical center.

Great interest was shown in these two courses and many of those who attended emphasized the importance of such a course on account of the dual purpose offered a busy doctor, namely, training for the duties required of a military surgeon and the opportunity for a refresher course in any specialty of medicine.

All applications for the course of training at the Mayo Foundation should be made to the Director of the Mayo Foundation through the Surgeon, Seventh Corps Area, and applications to take the course at Washington University School of Medicine should be sent to the Dean of Washington University School of Medicine through the Surgeon, Seventh Corps Area.

—————R—————

Madam: Listen, cook! My husband complains that the soup isn't good, the roast tastes flat, that the dessert is not appetizing, and so on. This can't last!

Cook: I agree, madam, that this can't last. If I were you, I should advise him to consult a physician.

\* \* \*

"Which travels faster—heat or cold?"

"Heat, because you can catch cold easily."

\* \* \*

Motorist: "Hey, it's pretty fortunate for you this happened in front of a doctor's house."

Victim: "Yeah—but I'm the doctor!"—Life

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### Prognosis Versus Treatment in Pernicious Anemia

E. A. MINER, M.D., Independence ..

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

The libraries of the nation hold much of the recorded worthwhile thinking of the world. The progress of medical science becomes an interesting study. Last summer the writer, when in the library of the Denver Medical Society, had his attention called to a book of relatively recent date,—1926. The volume was a treatise on *pernicious anemia* — apparently exhaustive of the subject. Yet scientific books occasionally seem incomplete, and here was one lacking in the latest knowledge on the subject for that year of the calendar.

In this book on anemia, to which reference is given, the chapter on Prognosis was scanned with interest. We found—to use the author's own words—that pernicious anemia is “discouraging.” He continues to say, “The patients never get well and the expectation of life is not for a long period. Many of the patients with pernicious anemia are dead within three years—a majority of them do not live longer than four years. Life longer than five years is so absolutely the exception”—that—“expectation of life”—is—“not cheerful.” We hold that such a prognosis was unsafe, though made in good faith and backed by an abundance of authority quite up to the time of publication. But in that very year (1926) a diet treatment was brought out which has apparently discounted many of the theories relating to pernicious anemia. Direct quotations are here made from the literature not in the spirit of criticism, but merely for the purpose of contrast.

We live in a period of greatest human effort, when development and change are taking place in rapid succession. Therefore is it no wonder that a weird and

hopeless prognosis would be almost instantly followed by a program of good cheer.

Of course we are free to say that now the outlook for the pernicious anemia patient is not “discouraging” but hopeful. Perhaps it is true that no patient with pernicious anemia is cured. Nevertheless it is true that he may recover; he may be pronounced “entirely well,” and he may enjoy life. For how much more can we ask? What more can we expect?

The expectation of the patient's life is not now limited to three, four, or five years. With timely care and, barring complications, we have good reasons to believe that he is restored to a normal expectancy. Yet it must be borne in mind that a *good* prognosis is not to be separate and apart from a most careful and painstaking conduct of treatment. It is here where *prognosis meets with relief*. It is *prognosis versus treatment*.

Again, by way of comparison, we quote from the author of five years ago. Regarding treatment he writes in the same manner, saying, “discouraging,” and adds, “No patient with true pernicious anemia has ever been cured . . . there comes a time when the patient does not react to any treatment, he gradually grows worse, and death ensues. Furthermore no treatment has so far been suggested which can be shown to have prolonged life. The treatment in pernicious anemia is therefore symptomatic—calculated to improve the condition of the patient while he is alive, to keep him more comfortable, and to prolong life if possible.” He goes on to say that the patient has his ups and downs; remissions and relapses occur with or without treatment, hence it is “difficult to estimate truly the value of any measures carried out.” He further suggests the patient “should have plenty of fresh air and sunshine.”



Now it is almost needless to say that counsel and advice of four or five years ago—concerning anemia—then generally accepted as good and correct, is not worthy of present day practice. However one holds a kindly respect for old books, also for these out-of-date modern ones. They portray the thought of the period in which they were written and one cannot deny that the authors wrote well. Yet times change, and change comes to treatment of the sick.

Since the year 1926, one seldom uses the word "discouraging" in reference to pernicious anemia. For a majority of cases do react to treatment. Under favorable conditions they rapidly improve; they do recover, and they return to a normal life. While it is true that a few years ago there was no specific treatment, all of us are now quite familiar with the liver diet as outlined in recent literature. Response to this diet by the patient is definite, and there is often no need of any symptomatic remedies.

Nor at this stage of research are we unmindful of other remedial measures. Yet in a review of current literature one concludes that the liver diet is not *passee*; that it still holds its place not only as a leading remedy for pernicious anemia, but stands as a type of diet applicable to many other human ills.

In stressing the liver diet, we keep in mind not only the value of mammalian liver, but along with this recognize the importance of the other foodstuffs which are emphasized in the detailed outline as given by the originators, Minot and Murphy, who first made the application to the treatment of pernicious anemia.

In passing one must also give due credit to Whipple, whose scientific experiments led to the discovery of blood regeneration in the presence of the feeding of liver.

We believe that every case of pernicious anemia presents many problems, hence in prescribing the diet due consideration should be taken of the individual. The outline as given by Minot and Murphy is somewhat flexible and is adjustable to the various cases. In feeling ones way with the patient the physician should first convince him of the import-

ance of dietetic procedure if any relief is to be forthcoming. In the next place the diet should be pressed to such an extent as to maintain a certain blood status in the individual.

In the diet, liver holds first place. To get the patient to take sufficient amounts is ever a problem. The amount necessary is such a daily quantity as will maintain a red blood cell count of 5 million per cubic millimeter, or better. The Minot-Murphy schedule calls for a minimum of 120 grams per day. The writer, in his own personal experience with four and one-half years of liver feeding, used 240 grams (cooked weight) daily, during the first year. Then in the following year on the diet, this amount was gradually reduced to 100 grams,—which amount has since been the constant daily dose. To this we give the name, *protective dose*; that is, the daily amount of liver required to give and maintain in the individual a count of 5 million red blood cells per cubic millimeter, or over. We believe that the *protective dose* of liver is adequate to prevent the inroads of cord changes, or nerve degeneration, so frequently a symptom or sequel in pernicious anemia. Therefore, at no time must the patient falter in strict adherence to the diet on which he is to continue daily, year after year, indefinitely.

All important as liver is in the diet, the writer does not recommend it as a regular component part of any meal. As a matter of routine the required daily amount (100 grams) is processed from "select" calf liver, which is cooked, ground and sieved; then mixed with warm water, and taken as a cocktail prior to the breakfast hour. It is an appetizer. Thus the taking of liver becomes a habit rather than a hardship. Perchance liver may be distasteful, or otherwise objectionable. Then we recommend the patient try the method here described, taking the required amount without delay or mincing, and doing it quickly. With a little practice he can soon train himself to hold his breath, close his eyes, and swallow the dose without tasting, smelling, or seeing liver while taking. Simplicity overcomes the difficulty.

It has been said that patients fed on liver together with crackers, respond to the desired changes in the blood picture. Fortunately our diet is not so limited, for the detailed Minot-Murphy outline contains a generous variety. In addition to the liver the daily menu provides of fruits, 400 grams; of red muscle meats, 70 grams; of green vegetables, mostly of low carbohydrate value, 300 grams; also, one egg and a glass of milk are allowed. Whole wheat bread is to be preferred. Restricted importance is attached to fats, limited to 70 grams, or less; also to sugary foods, which are to be used sparingly. Condiments in excess are to be avoided. Sufficient starchy food is added to give a full and balanced ration. The list is most attractive and bountiful. Thus there is no valid excuse for the patient to become an addict to a one-sided diet, a condition which often calls for correction.

For the pernicious anemia case there are a few articles of food not included in his fare; namely, fish and most pork products, also nuts and cheese. Most cakes and all kinds of pies are off the menu.

Of the various articles permitted one can combine them to complete satisfaction. With a little planning, the table can be set to meet any requirement. It is obvious that the Minot-Murphy diet is highly vitaminized. Special attention is given to foods rich in vitamins A, B, and C, those essential to nutrition, growth and repair, and for giving a sense of well-being. From a careful study of the details one soon learns to select the articles of food for his particular need. Nor in this is he apt to err if he keeps close to Nature, getting such articles that have developed in much sunshine.

Now concerning sunshine for the patient this strange advice is given, "Keep out of the direct sunlight as much as possible." This caution is directly contrary to the recommendation of half a decade ago. A study of the cases reveals that most relapses and other untoward symptoms happen in the summer months. Hence the routine of sun baths so often

prescribed is apparently a contraindication in pernicious anemia.

We of the colony of pernicious anemia are to get our sunshine and energy transmitted chiefly through the food we consume. The marvel of the whole subject is that just food controls pernicious anemia. The secret of the process is held in the blood stream, enriched, energized and vitaminized, from whence come the results. When such a blood courses through an elastic circulatory system, results are sure to follow. Aches, pains and exhaustion disappear. Faith, hope and energy return. Tissues, once sick, are influenced to recover. The body tends to return to normal. The wonder and surprise of the physician become the joy, reality and satisfaction of the patient. Though prognosis in pernicious anemia was once most unfavorable, we now know that diet protects and restores.

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#### Rational Radiology

G. W. JONES, M.D., Lawrence

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

This paper is not limited to the program title, but is concerned with "Rational Radiology"—the science of radiant energy including the radiant energy of roentgen rays, radium, and ultra violet rays. While the author believes his paper to be a conservative presentation of established facts, it is not expected nor even desired that all of you are going to agree with what he has to say; otherwise the effort put forth following out cases, looking up statistics, and getting the late data from the greater clinics could have been spared.

The discriminating use of a new agent for the relief of manifest pathology is never co-extensive with its discovery. This was true years ago when quinine was isolated from Peruvian bark. In a marked and almost to a disastrous extent, it was true of the early experience with salvarsan where a single shot of



606 was regarded as a positive cure. In so-called electro-therapeutics this also was true, and still to many of us the sheen and splendor of our child-like faith remains untarnished and we continue to cure corns, cancers, carbuncles, ingrowing toe-nails, or what have you, by simply turning on the juice. In the field of surgery, the applications of certain procedures were hailed as a panacea for various and sundry ailments for which these operations were never designed. To such an extent was this formerly true that up to a few years ago not many women were at large with two whole ovaries. In the early days of kidney surgery before we had learned that the right kidney generally can be mapped on deep inspiration, an ambitious surgeon could gently close his eyes and see floating kidneys—kidneys all through the air, floating everywhere.

In the Renaissance of cesarean section when one of the great educational executives was loaned to the regents of a western university to clean house, he called in the Dean of Surgery and had him promise that so long as they both remained at that university there should never again be such an outbreak of cesarean sections as the one that had just been gotten under control where, in a town of 300 people, there had been 20 cesarean sections during the year just closed.

In the early use of the roentgen ray there appeared this same over-confidence in attempting to accomplish more by its use than its achievement justified. Neither has radium escaped this general tendency to over-confidence in the use of a new agent—the over-confidence being encouraged on the radical side by the somewhat uncanny nature of the rays emanating from this chemical; the conservative side fostered, no doubt, by the fact that from the beginning the distribution of radium for the most part has remained in the hands of a limited number of users. On the whole, however, as concerns radium and radiology in general, the profession has profited by the experience of its more cautious members and gradually is becoming conservative in its attitude toward these energies.

Most of you are familiar with the discovery of roentgen rays—termed by their discoverer on account of their unknown or “*x*” nature, *x*-rays, and to many, still so known. Not all of you, however, may recall that radium has been before the scientific world only two or three years less than the roentgen ray, the latter having been announced by Konrad Roentgen in December, 1895, while radium was isolated from uranium and announced in a joint paper by the Curies and Bemont in Paris in 1898.

Radium is never found in its pure state. It is the product of the slow disintegration of uranium, one of that group of alkali earth metals comprising such elements as magnesium, barium, strontium, and calcium. Small amounts of uranium are found in such ores as uraninite, carnotite, autunite, pitchblend, and in a few recently discovered ores in the Belgian Congo. When one considers that there is but a small amount of uranium isolated from these parent ores and that there is but one part of radium to 3,400,000 parts of uranium, it is not difficult to understand the high price of radium. Up to the year 1922 about four-fifths of all the world's supply of radium was produced in the United States—much of it from ores mined in Boulder County, Colorado. Since then, 95 per cent is produced in the Belgian Congo from ores so rich in uranium that the Belgian Company has gained a monopoly on the radium market of the world.

The emanations from radio-active salts are somewhat analogous to the rays projected from the anode target of the Coolidge tube save that in radium the rays are the product of the slow disintegration of the radium element. Radium being unstable in its metallic state is used therapeutically as a radium salt, generally as the sulphate or the bromide.

Some of our knowledge of the structure of the atom has come to us through our investigation of radium, in the disintegration of which there are shot out from the radium atom three distinct types of radiant energy—alpha particles, beta particles, and gamma rays. The alpha particles are positively charged particles consisting of helium nuclei pro-

jected from the parent radium nucleus at the astonishing speed we are told of 12,000 to 18,000 miles per second. They are entirely absorbed by three inches of air or thinnest paper and possess no therapeutic value.

Beta rays are divided into two or more types depending on the wave length of the ray, all being shot out from the parent nucleus of the atom at a speed of 60,000 to 180,000 miles per second. These rays which are negatively charged electrons are absorbed by one millimeter of lead or four millimeters of aluminum.

Gamma rays — therapeutically the most effective — are high frequency ether vibrations similar to light with almost, if not quite, the same velocity. They will penetrate six to eight inches of soft tissue, or five and one-half inches of lead.

There is so much in common between the rays emitted by radium and the rays projected from the anode target of the Coolidge tube that in many cases their therapeutic application is interchangeable. With radium you have the advantage of precision; your source of energy being only a few millimeters from the recognized pathology. In roentgen rays you generally operate from a distance of 35 to 50 centimeters with more or less consequent loss of energy due both to distance and to scattering. Where deep penetration is required, however, the roentgen ray is the energy of choice.

When most of us were studying physics, we were taught that matter could not be destroyed. We might burn, or otherwise change its form, but, when the ash, smoke, gases, or other products of the change of form were collected, it would be found that the weights on the sensitive scales would just balance—a comforting thought in our hope for the eternal stability of the universe; but Einstein and his school say it is not true. Doubtless they are right. Were they not, there would be no such energy as radium rays, in the production of which, there is absolute destruction of much of the radium atom.

The time allotted is not sufficient to go into the history or the physics of the

quartz lamp. There is a limited legitimate field of therapeutic usefulness for this form of energy, the most outstanding of which is its influence in rickets where it is almost a specific, and in the irradiation of certain food products in an effort to augment their natural vitamin content. Due, however, to effective though not overly scrupulous salesmanship in placing this equipment in the hands of the "butcher, the baker, and the candlestick maker," manicurists, chiropodists, and so on, as well as to the manufacturer's extravagant claims of curing most if not all human ills—rid-ding the house of flies and the dog of fleas — many conservative men who might otherwise have found some use for ultra-violet have successfully resisted all sales talk.

The author's office in Lawrence is equipped with this lamp in order to round out the three forms of radiant energy but its use is limited to a carefully selected list of patients on whom we are reasonably sure to get results.

As regards therapeutic radiology, the general practitioner, the surgeon, and the radiologist are not so far apart as formerly. There are a few points of open discussion but for the most part we are all working in close co-operation.

It is well to remember that malignant cells are destroyed by roentgen rays, heat, or radium of an intensity that does not injure normal cells beyond rejuvenation. On this principle depends much of the efficacy of radiology—the younger the cell, the more susceptible to the rays. This explains why grade 4 squamous cell epithelioma and grade 4 sarcoma if treated before metastasis has occurred, can be overcome quite as easily as grades 1 and 2 made up of growths of greater cell differentiation and therefore older cells more resistant to radiant energy.

The general practitioner dominates the field. He is becoming more and more insistent that his patient early reports anything in the way of an abnormal manifestation of physiologic behaviour.

In America it is pretty generally accepted that in malignancies of the uterine cervix, radium is the measure of



choice except in the very earliest manifestations where there is little probability of metastasis; then radium and surgery are regarded with equal favor, surgery being preceded and followed by raying. When the condition has existed for some time, however, few surgeons would attempt its removal by surgery. A few European surgeons, notably Mr. Victor Bonney of London, and Professor Werner of Vienna, are doing a very extensive Wertheim operation, more radical than that done by most American surgeons. They not only remove the uterus, tubes, and ovaries, but do a complete dissection of the iliac lymph nodes exposing the ureters throughout their whole length in the pelvis and remove from a half to two-thirds of the vagina. It must be admitted that considering the nature of the pathology, their results are good and reflect great credit upon the wonderful technique of these very able surgeons. But since there are few men with either their surgical judgment or technical skill, I am more and more convinced that, by and large, well placed, well screened radium followed by deep therapy through every avenue of approach is the method of choice, this being possible in many places where there are neither Bonnies, Werners, nor surgeons of their class.

In September, 1927, Dr. P. P. Vinson inserted radium into the right bronchus of a young man and retained it in the center of a growth where biopsy had revealed a squamous cell epithelioma graded 3 by Broders. On March 11th this year, nearly four years after, he reports the patient feeling well and having gained 30 pounds since the implant of radium.

In squamous cell epithelioma of the lower lip, some excellent clinics are doing a block dissection of the glands of the neck, while others are depending alone on deep roentgen rays to both sides and the front of neck. Kaplan, who is in charge of the radiologic service of Bellevue Hospital, relies entirely on radiology.

In malignancies of the bladder around which not a little controversy has centered, one class of observers claim that

papillomas are benign growths; while another class with equal if not greater opportunities for observation, claim that, for the most part, these growths are malignant and that many are of the infiltrating type. In as much as the latter group contains such names as Bumpus, Crenshaw, Braasch, Broders, and MacCarty, with whose splendid work the writer is quite familiar, he is inclined to accept their judgment.

Barringer<sup>4</sup>, in a paper delivered at the Detroit meeting, before the Section of Urology, reports a series of 98 cases of cancer of the bladder where 43 per cent of the papillary type and 29.7 per cent of the infiltrating type of cancer were controlled for periods longer than three years. This is a better showing than that achieved by any other method of approach, the cold spark in the clearly benign papillomas, even being secondary to this.

Almost three years ago, a feeble old gentleman approaching the 80's, came into my hands with an infiltrating squamous cell cancer of the bladder that not only had penetrated the bladder wall, but also had penetrated the structures of the groin, the anterior and inner aspects of the upper thigh, destroying portions of the upper third of the femur and part of the bony pelvic wall. Periodic applications of radium have held this in check for nearly three years now, and last week when the old gentleman returned for his treatment, he said he was feeling better than he had for at least three years. By using well screened radium in clearly inoperable cancers of the prostate, we have extended the lives of several old men well past the five-year period and some of them are feeling free from pain and distress.

Drs. H. H. Bowing and Robert E. Frick<sup>5</sup> give a table in the course of a paper reprinted in the *Journal-Lancet* of March 15, 1931, in which they show both the immediate results and the results at the expiration of five years in a series of 1001 malignancies of the uterine cervix.

#### IMMEDIATE RESULTS

Apparently cured.	55.39%
Improved	42.38%

Unimproved ..... 1.11%  
 Died ..... 1.11%

## FIVE YEAR RESULTS

Early cases ..... 75.00%  
 Border line ..... 61.53%  
 Inoperable ..... 21.49%  
 Modified ..... 24.82%

Modified cases are those having had some kind of work done elsewhere. In the course of this excellent review of cancer of the uterine cervix, the authors stress very properly the importance of the factor of time. Time, in terms of early diagnosis, is our best friend in hopeful results. Time again, in terms of tardy diagnosis, is the unfortunate woman's deadly enemy.

In a letter received last week from Dr. James C. Masson he says in regard to cancer of the uterine cervix: "There is no doubt that in the great majority of cases radium and *x*-ray treatments alone are advisable as the results are equal to the results of radical surgery and the mortality is definitely less." The remainder of his letter is less favorable to radiology though not unfavorable. He further writes as follows: "I personally feel, however, that in the hands of men doing a great deal of pelvic surgery the best results can be obtained in the early cases where the growth is confined to the cervix if a radical Wertheim operation is performed after a thorough destruction of the local growth with the cautery and then followed up by *x*-ray and radium. There should not be a mortality of more than 4 to 6 per cent. In our own series in the last 47 cases there has been only one death."

Note particularly that Dr. Masson says "in the *early* cases." There are not many pelvic surgeons in the class with Dr. Masson and while I do not at all hesitate to accept his statements and judgment at 100 per cent, I am still firmly convinced that even in the hands of good surgeons, not super pelvic surgeons, radiology is the method of choice. No matter what the plan of approach, I can recall no surgeon who does not favor post-operative radiology.

In a recent review by Loucks<sup>1</sup> to which I do not wholly subscribe, he insists that radium is the method of choice in the

treatment of toxic goiter. He inserts the needles into the gland or applies a 50 milligram pack locally to be moved far enough to avoid close cross firing. In toxic goiter associated with glycosuria he maintains that radium accomplishes marked restoration of sugar tolerance and that altogether his results are better than those obtained by surgery.

Ginsburg<sup>2</sup> ardently advises radium in all types of goiter claiming among other advantages the economy of absence of hospitalization, freedom from anxiety, and the fact that the patient may continue his ordinary vocation.

In the British Medical Journal for September 20, Forsdike<sup>6</sup> reports a series of 181 gynecological cases treated with radium. Dividing these cases into three classes he gives 134 cases clearly inoperable in which he secured palliation and prolongation of life in all of them although none were cured. In most of these surgery even at the best of hands would have achieved neither palliation nor prolongation of life. In his border line cases he reports 33 with 4 cured and palliation and prolongation of life in 29. Operable cases in which surgery would not be absolutely contra-indicated, there were 14 with 4 cured. While this is not so encouraging as might be desired, it must be remembered that Forsdike is a conservative gynecologist who certainly holds no brief for radium; moreover, in his report there was insufficient data as to classification of malignancies either as to type or time.

In the same journal of next issue Ward<sup>7</sup> reports a series of nearly 1800 consecutive cases of squamous cell epithelioma at the Radium Institute of London with 91 per cent of the hypertrophic type apparently cured, 77 per cent of the flat type, and 38 per cent of the deeply ulcerated type, many of which involved bony structures, remaining cured past three years.

Handley<sup>8</sup>, writing in the London Practitioner of October, favors buried radium needles for operable breast cancers unless the patients may be old, have myocardial degeneration, or other organic heart disease, making them poor sub-



jects for radium. In these cases he prefers ablation using for that purpose the endothermic cautery knife.

Keekynes<sup>8</sup> writing in the same issue of this journal, regards radium as the method of choice in all early breast cancers and the only hope in the inoperable type. This is rather a radical stand favoring radium in breast cancers of all types and degrees of malignancy and is somewhat at variance with the views of conservative American surgeons.

A man 62 years of age with a squamous cell epithelioma involving the mastoid process and overlying skin has responded with what appears to be a cure after about a dozen treatments alternating between radium and 140 K.V. roentgen rays at five milliamperes.

The British Radium Commission<sup>3</sup> now owns 17 grams of radium which it is distributing in various geographic radium centers in order to render as wide a service as possible in malignancies. Certain standards of procedure are adopted and uniform records are required before their allotment of radium is supplied. At the latest reports available, Birmingham, Bristol, Leeds, Liverpool, Manchester, New Castle, and Sheffield, in England; Aberdeen, Dundee, Edinburgh, and Glasgow in Scotland; and Cardiff in Wales have conformed to the requirements of the committee and have received their allotment of radium. This plan of geographic distribution is coordinated with the British Empire Cancer Campaign and the Medical Research Council of the British Medical Society.

In some of the leukemias, notably myelogenous leukemia, where conservative surgery has long since abandoned the field, radium has achieved results that have made the lives of these formerly hopeless patients both comfortable and useful. An outstanding case of the writer's was first seen two and a half years ago when the man was an invalid, unable to do any work or chores about the farm, but trying to keep up part of the time. He was colorless, had a white blood count of nearly 300,000 with the myelocytes dominating the field; a red count of 1,231,000, and an enormous spleen extending beyond the mid-line. In

his case radium packs applied to two locations far enough apart to prevent cross firing, brought his white count down to 60,000 and his reds up to 4,450,000. At the end of a dozen such applications of 200 m.g. hours each, he expressed himself as being entirely well. He is doing a man's work, and says he never felt better in his life. Radium has not cured him, and it is not expected to, but once every six or eight months, by resorting to radium packs, he is soon restored to his usual health. He is a farmer and his work is heavy. I have found it impossible to get his whites down to 60,000 again, but when he begins to "slip," we have no trouble in reducing his whites to 100,000 and boosting his reds up to or above 4,000,000 without resorting to transfusion.

In conditions involving the face or neck, where the pathology plus the treatments are likely to leave a scar, the patient should be so informed before treatment is begun. A frank talk with the patient, explaining what may be expected from the treatment contemplated, keeping well to the conservative side, is time well spent. It not only assures the patient of your genuine interest in his case, but it classifies you in a desirable way. Not only that, but you will be doing your bit to raise radiology to a higher plane.

In young women afflicted with excessive and irregular uterine hemorrhage where a thorough curettage and biopsy prove it nonmalignant, and immediate placement of 100 m.g. of radium for eight hours will give greater permanent relief than that obtained by any other measure of which I have any knowledge. This dose does not sterilize.

In women just entering the menopause with the indications of a stormy career, there is nothing that will clear up the excessive and irregular hemorrhage and give your patient the assurance that after all the menopause is not so menacing, as 100 m.g. of radium for 20 hours.

In women well past the menopause, where an ugly, brownish, foul-smelling discharge appears and on bimanual examination you find a uterus near the navel, a thorough curettage plus a

pathological examination that proves it non-malignant reveals a case where radium is almost specific. In these potentially pre-cancerous cases 100 m.g. well screened radium for 24 to 36 hours, solves your problem and in all probability the uterus will gradually resume the normal size for a woman of 55 to 75 years of age. Where I have been able to rule out malignancy, this measure has not failed me.

It is not alone in cases of malignancy that radium and roentgen rays are of legitimate use. In actinomycosis, tuberculous adenitis, adenomyoma, hemangioma, inflammatory conditions, keloids, lymphangioma, lymphedema of the face, and even in conjunctivitis and verucca it has been used in very exclusive clinics all over the country, though I confess I am not prepared to advise as to many of these conditions. In some of the uses of radium, however, the relief is so manifest, the cures so permanent, and the general well being of the patient so improved that it would seem unwise indeed to attempt any other measure of relief thus far known.

Roentgen rays and radium are not panaceas; neither is quartz light. My experience with cancers of the mouth has not been satisfactory. Due possibly to my not having radium in the right form, my results have not been good. I have advised these cases to go to larger clinics where they were supplied with just the right means of placing radium to insure better results. Moreover these patients have returned for treatments only when the family physician so advised. I am going to find out this summer where my trouble has been.

Where radium fails, not many measures will succeed. It will not be universally successful but in a large class of cases where it is conservatively indicated, the results achieved either by radium alone or where followed by roentgen therapy have, not only in my hands but in the hands of a number of conservative users of this energy, rescued valuable lives from pain and suffering and from an era of hopeless invalidism to which without the use of this

agent they would assuredly have been consigned.

In not a few clinics and localities where the workers operate in more or less of a group, the mistake has often been made of having the surgeon or the internist determine when the patient should return to be re-rayed. This can result only in confusion if it does nothing worse, and distributes the responsibility instead of placing it on the radiologist where it ethically and morally (not to say legally) belongs.

It may not be unfair to say that, for the most part, surgery selects the clearly operable cases, and the statistics of surgery are made up from this tacitly admitted operable class of malignancies. Radiology, on the other hand, must be content to accept and make most of its statistics from a class of neoplasms less promising of favorable results. It would seem therefore, that comparisons of end results can be made only when malignancies of the same class and the same degree of metastasis can be compared—an almost impossible undertaking.

At present, there is much to be accomplished before radiology comes into its own. While recognizing the value of, and the contributions from the pioneers in diagnostic and therapeutic roentgenology and radium, and the worthwhile observations of the users of ultra-violet rays, I am convinced that, until we succeed in raising radiology to a higher plane, there will remain extravagant claims as to therapeutic results; there will be inefficiency, and more or less confusion and misunderstanding between the technical and clinical aspects of cases on the border-line.

The utter disregard of the ethical standing and the efficiency of this means of diagnostic precision and therapeutic worth, on the part of somnolent American medical schools is not easily understood nor freely condoned. There are only one or two American medical schools that are half-way prepared to give adequate training in this important subject. European schools, notably some in France, Germany, Italy, and Sweden are giving very good courses in radiology and are turning out a few competent



radiologists, but the doctors of America for the most part have been compelled to rely upon the naturally prejudiced training and information of the sales force from the manufacturers of equipment—an amalgam of scientific data and sales propaganda in just what proportions I will leave you to guess. Many of these men I personally know and admire. They are fine fellows and good salesmen.

We must ask our medical schools and large hospitals to establish on a high plane a department of radiology to include within its scope roentgen rays, radium, and ultra-violet rays; in fine, to incorporate within a single department presided over by a competent scientific medical man not only familiar with the physics of roentgen rays, radium, and ultra-violet rays, but equally familiar with the clinical aspects and needs of cases submitted to his care and judgment. In this way and only in this way can radiology, a science of vast potential usefulness to patient and doctor, be salvaged and rescued from the conditions we find it in today where high powered salesmanship coupled with attractive payment down and payment forever places sundry equipment in the hands of outlawed practitioners of dubious intelligence and no training, as well as supplying the barber shops, beauty parlors, manicurists, and bath establishments with equipment that make a joke of the serious efforts of trained men to render real service.

Only in this way, too, can these valuable forms of radiant energy be debunked of the unwise extravagant claims of improbable cures and the science of radiology be placed on a basis of scientific, demonstrable fact permitting accurate classification of standardized technique and making end results at all comparable.

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#### The Operative Treatment of Ptosis

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All of the numerous operative methods and the various techniques advanced and advocated for the cure or improvement of ptotic eye lids may be grouped under four distinct procedures: (1) the removal of thickened tissue; (2) resection or shortening of the tarsus, levator or both; (3) the substitution of the occipito-frontalis muscle to act in place of the paretic levator and (4) the transplantation of the superior rectus so that this muscle will elevate the lid in place of the deficient levator. The purpose of this paper is to discuss these various fundamental procedures with some of their more elegant modifications and to relate their relative merits, indications and complications.

That so many various surgical aids have been tried shows that no one method will be effective in all cases and that no ideal operation has as yet been found. This paper is limited to the surgical treatment of ptosis and it is understood that no operative aids should be tried in paralytic cases until at least a year has elapsed and the medical care directed against the etiological factor has proved of no avail. Further, in congenital ptosis, operative procedures should not be performed in young children as often much power is later restored to the weakened levator.

The aim of every surgeon operating a case of ptosis is two fold. He must strive to bring the lid to as near the normal as possible not only as regards the cosmetic result but must further strive to improve the mechanics of the lid so that it will function along with its fellow and perform as nearly as possible the normal movements. It will later be seen that by using this definition as a measure of worth many of the operative procedures advocated will miserably fail in their accomplishment.

The surgical progress of ptosis mirrors the progress of every line of endeavor in its first simple performances and these followed oftentimes by trial and error by more refined and complicated maneuvers. The treatment of ptosis was

the forbear of plastic surgery and the various operations devised utilize all of the methods used in this important branch of surgery from the excision of skin and the swinging of skin flaps, to the transplantation of muscles and tendons with their resections and, the utilization of fascial hammocks and bridges.

The date of the earliest operation could not be determined but it was probably performed long before the nineteenth century, for as early as 1840 it was called "the old operation<sup>2</sup>." The technique of this method was most simple. An elliptical piece of skin was excised from the upper lid, the size depending on the amount of ptosis and the edges were brought together by sutures. The only merit that this procedure had lies in the fact that with it the surgery of ptosis probably was born. However, the results if not entirely wanting were to say the most very meagre. Further, a conspicuous scar was often as noticeable as the primary disfigurement and lagophthalmus was an all too frequent complication. However, this technique is still advocated by Morton<sup>4</sup> in certain cases due to a redundance of skin or to adiposity as well as to certain blepharospasms caused by trachoma, phlyctenular conjunctivitis, etc. He adds, however, that this type of ptosis seldom requires surgical interference.

Von Graefe modified this operation in 1863 by including in the excision some of the fibers of the orbicularis as well as the skin in the hope of weakening the antagonist of the paretic levator<sup>5</sup>. This method is but slightly better than the original "old operation" and it is a sorry fact that a name such as Graefe's was attached to this operation for the name alone probably did most to keep this procedure in use for so long. However, this was a step forward and was decidedly better than the disfiguring method which Gerold advocated in 1843. He merely made a large aperture in the drooping lid for visual purposes. The operation of Graefe carries with it the same merits and faults as the original "old operation" and its results were little if any different. Later, in some instances the whole lid was shortened,

skin, tarsus and all in an attempt to raise the lid border over the cornea. However, this operation was never popular because the results were so bad and lagophthalmus an almost inevitable complication.

As early as 1830 Mr. Hunt attached a tongue of skin dissected from the ptotic lid to that portion of the skin of the brow upon which the occipito-frontalis muscle acted. However, this operation never became popular probably because of the poor cosmetic results and seems to have been almost forgotten only to be revived by Panas half a century later.

At about the time of Graefe's operation, Bowman (1861) introduced his sutures. Dansart, 1880, Pagenstecher, Hunt and later Mules, Worth, DeWecker, and Hess all utilized this method consisting of placing sutures from the lid usually in the region of the tarsus and letting them emerge over the brow in the frontalis muscle. All of these operations relied on the occipito-frontalis to substitute for the paretic levator. The classical operation consisted of placing three sutures under the skin from the brow to the lid. The various modifications differed from the original only in the suture material used and in making various incisions, either in the lids, in the brow, or both. These procedures relied on the formation of cicatricial bands to form in the channels made by the sutures and thus a mild grade of suppuration was welcomed. Several modifications consisted of tightening the sutures from time to time until they cut out of the lid. Still later, metal sutures were used. Ensor<sup>6</sup> used the cautery to fix the lid to the frontalis. And later still, as recent as 1922, the living suture hammock of Gallie and LeMesurier was used. They utilized the fascia lata and swung it across the tunnel in the lid bringing the ends out at the brow. Reese<sup>8,9</sup> also used this operation. The merit of these operations lies in the relative simplicity and immediate results, but complications are common. The ensuing suppuration may be serious and may result in cellulitis, erysipelas, or even cavernous sinus thrombosis. The sutures may slip, and again, lagophthal-



mus is a frequent concurrent. The faults consist of the fact, wholly against all surgical rules, that suppuration is invited and necessary, that shrinking scars are welcomed and that the method, by the frequent tightening of sutures, is quite painful. Later the tissues usually relax so that the end result is often much less than the immediate.

Another modification growing out of the method of using the frontalis muscle consisted of using bridges or skin flaps swung from the lid and attached to the brow muscle. The most popular of these operations was that of Panas. He made a horizontal incision in the brow and then a wedge shaped flap of skin from the lid. The remaining bridge of skin was undermined and the wedge shaped tongue of skin was anchored to the frontalis by sutures. This method, or one of its many modifications, was used extensively and improved by Allport, Grimsdale, Tansley<sup>10</sup>, Phelan<sup>11</sup>, Machek, Roberts<sup>12</sup> (1916) and others.

This maneuver, although a decided advance in operative skill, still is heavily overweighted by its many faults. A small pit<sup>13</sup> is formed under the brow which is quite noticeable, and oftentimes hairs protruded from this pit. Then there is always an annoying secretion formed from the buried skin flap<sup>14</sup>. Here again, a troublesome lagophthalmus is a frequent sequel.

Angelucci, Soville, Fergus<sup>15</sup> and others tried to attach a part of the occipito-frontalis muscle itself to the levator or tarsus, but this operation was never satisfactory. In 1908 Fergus added a resection of the tendon of the levator to this operation<sup>16</sup>. This was also tried by Gillet DeGrandoat and Woodruff<sup>17</sup> but the results were no better than in the original procedure.

Probably one of the biggest advances in ophthalmic surgery came in 1897 when Motais<sup>18</sup> published his technique of transplanting a tongue of the superior rectus muscle into the tarsus of the ptotic lid. The classical operation was performed entirely through the conjunctiva with an incision above the tarsus. The conjunctiva was then freely undermined to the fornix. The middle third

of the superior rectus was then dissected out forming a tongue which was sutured to the tarsus. Shoemaker in 1907 modified this by adding a skin incision for the purpose of more exact anchorage of the rectus tongue. This was again modified in 1924 by Kirby who performed the whole operation through the skin. George Young<sup>19</sup> united the whole of the superior rectus to the levator without tenotomizing either muscle and claimed excellent results.

The advantages of Motais's<sup>20</sup> method are (1) that the operation is performed without a visible scar. This is certainly important in a procedure which is primarily done for its cosmetic result. (2) If the operation is performed correctly there will be a synchronous movement between the lid and the globe thus approaching the normal function of these structures. (3) The operation obliterates the scowl so commonly seen in ptosis patients and necessary to function following the panas method. Here again, the cosmetic and even the psychologic improvement is fulfilled. (4) There is a close apposition of the lid to the globe. In some of the other operations the lid is bulged out or otherwise distorted. These advantages are certainly much in favor of this operation and it is one of the best methods so far advocated.

The disadvantages lie in the fact, first, that if the superior rectus muscle is not normal the operation cannot be used. This keeps the operation from being the ideal method for it can be used only in selected cases. Second, by weakening the power of the already weak superior rectus muscle, it may cause a troublesome diplopia. Third, it forms a small central attachment at a single point. This is liable to cause a tent-like pulling up of the central portion of the lid, while allowing the sides to sag. Fourth, it is not infrequent that after a successful operation the anchoring suture slips and all is lost<sup>21</sup>. Heed<sup>22</sup> reports such a case and he was forced to perform the Hess operation. I have had a like casualty in a small Negro boy.

The last group of operations we have to consider has to do with changing the

position of the levator either by resection of the muscle, the tarsus or both. This technique probably was advocated earlier than that of Motais. Stevens<sup>23</sup> in 1896 published his operation for the advancement of the levator. He made an incision in the lid border in the gray line splitting the lid. Everbush later took a tuck in the tendon of the levator and Bowman, after severing the attachment of the levator to the tarsus, resected the tarsus. To this Madox added the cautery to assure a broad reattachment of the levator and tarsus. In 1897 Olive shortened the levator muscle working from the conjunctival surface and a year later Wolf did the same thing excepting that his approach was from the skin surface<sup>24</sup>. Clarborne<sup>25</sup> resected the tarsus and attributed the good results he obtained to the fenestration of the tarsus and to stitching through the tarso-orbital fascia. Dimitry<sup>26</sup> added canthoplasty in ptosis cases where there occurred a small palpebral aperture which was stretched horizontally. This is a great advance in many cases of bilateral congenital ptoses where there is often not only a blepharospasm but usually a blepharophimosis as well. Blaskovics<sup>27</sup> in 1923 combined the advancement of the levator with a shortening of the tarsus. The operation is performed entirely from the conjunctival surface and is not a hard operation. He says that no muscle functions in a similar way to the levator. According to him complete paralysis or even absence of this muscle is no contraindication to this method as so many believe. This operation was slightly modified so as to form a normal fold in the lid following the procedure<sup>28</sup>. The conclusions drawn by this author are that complications do not occur and that following the operation the elevation of the lid is normal in the horizontal position and the curvature is correct. Even in cases of rigid lids there is some motion. The immediate effect is less than that finally obtained. Bruns<sup>29</sup> concludes that advancement of the levator is the most physiologic method used but warns against it in cases of complete paralysis. However, he states that even here the result may be encouraging due to the

shortening of the tarso-orbital fascia. I have resected the levator and shortened the tarsus in three cases. In two of these cases the results are excellent while in the third, a case of extreme ptosis, there is still a drooping although the lid margin is above the cornea on direct gaze. One of the successful operations required being done a second time to secure adequate results. The fact that the lid had already been operated was no handicap in performing the second operation.

#### CONCLUSIONS

1. There are but four distinct operative procedures for the relief of ptosis. (a) Removal of thickened tissue. (b) Resection or shortening of the tarsus, levator or both. (c) Substitution of occipito-frontalis muscle for the levator. (d) Transplantation of the superior rectus into the tarsus.

2. Only the transplantation of the superior rectus and the combined shortening of the tarsus and levator are worthy of performance.

3. The combined shortening of levator and tarsus is the easier to do and can be done in all cases even in the face of absence of the levator. Therefore, this method approaches the ideal.

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Patient (angrily).—The size of your bill makes my blood boil.

Doctor.—That will be twenty dollars more for sterilizing your system.—W. F. W. in J.A.M.A.



**A Resolution Concerning a New Plan of Benefits To Veterans of the World War With Non-Service Connected Disabilities Together With a Discussion of the Resolution**

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To Veterans of the World War:

The following resolution was adopted by the House of Delegates of the American Medical Association at Philadelphia in June of this year:

"Whereas, The Federal Government has inaugurated the policy of rendering medical and hospital benefits to veterans of the World War with non-service connected disabilities; and

"Whereas, This policy was inaugurated over the opposition of the American Medical Association; and

"Whereas, The policy now in force, if carried to its logical conclusion, involves the construction, the staffing, and the maintenance of a sufficient number of hospitals to accommodate the hospital needs of all the veterans of the World War; and

"Whereas, Such a policy places the federal government in unnecessary and unjust competition with the civilian hospitals and the medical profession of the United States; and

"Whereas, The present policy is of unequal benefit to veterans by reason of the fact that many disabled veterans cannot (for one reason or another) avail themselves of the benefit; therefore be it,

"Resolved, That the House of Delegates of the American Medical Association petition the Congress of the United States and the American Legion to abandon the policy of rendering hospital and medical benefits to veterans of the World War with non-service connected disabilities and substitute therefor a plan of disability insurance benefits with the following provisions:

"First, the creation of a Bureau of Disability Insurance in the Veterans' Bureaus as now constituted.

"Second, the issuance of a disability insurance policy to each veteran with disability benefit clauses as follows:

"(a) The payment of a weekly cash

benefit during a period of total disability, and

"(b) The payment of liberal hospital benefit sufficient to cover the hospital expenses of a veteran during a period of hospitalization for any disability. Such benefits to be paid to a veteran on satisfactory proof of total disability, and

"Third, Such other provisions as are necessary for the proper administration of the act.

"Be it further,

"Resolved, That the proper officers of this Association be instructed to approach the officers of the American Legion, with the view to securing the adoption of the policy above set out as a part of the legislative program of the American Legion, and be it further

"Resolved, That each state medical association be requested to form a committee whose duty it will be to approach the state and local Legion posts throughout the country with a view to securing the adoption of this program by them."

As the author of the resolution, as a veteran of the World War and as a member of the American Legion, I am addressing this communication to veterans with a request that you give it consideration.

The Congress of the United States has provided several different forms of benefits for veterans of the World War. The one form of benefit to which the resolution relates is that which provides for free hospital, medical and surgical attention for veterans with *non-service connected* disabilities.

It will be borne in mind that a service connected disability is one which was caused, or is presumed to have been caused, by service. A non-service connected disability is one which is not related to service.

This policy of the government, if carried to its logical conclusion, involves the government in the construction and operation of a sufficient number of veterans' hospitals to accommodate the hospital needs, for all purposes, of all the veterans of the World War.

When this policy was first inaugurated it doubtless was the intent of Con-

gress to provide a service for those veterans who were ill, in need of hospitalization and unable to pay for it. No one can criticize such a motive and far be it from me to attempt to do so. One, in my judgment, may criticize a plan of benefits, and especially so if a more satisfactory plan is offered to take its place. That was my purpose in sponsoring the resolution.

Therefore, two specific plans of benefits are under discussion; one is the hospital plan *now in force*. The other is the disability insurance plan proposed in the resolution.

It is intended that the insurance plan should apply to the same veterans as the hospital plan applies to.

The hospital plan of benefits provides for each veteran a bed in a hospital, and surgical and medical attention, *provided his condition requires hospitalization*.

It is readily apparent that this plan of benefit is quite limited. It applies only to the veteran whose illness requires hospitalization and who is in position to accept hospitalization. This reduces the benefit to a limited number of veterans. For example, a majority of illnesses do not require hospitalization. The veteran whose illness is of such a character as not to require hospitalization receives no benefit regardless of his economic distress. His disability is just as complete and his economic need just as great as the veteran whose illness or injury does require hospitalization.

Secondly, the condition of the veteran from acute illness, or injury, may be such that he cannot be transported with safety to a veterans' hospital, or the condition might be such an emergency that it could not wait, in which cases the hospital plan would be of no benefit to the veteran.

Again the illness, or injury, of the veteran might require hospitalization for proper treatment, but the circumstances of the family prevent him from accepting the benefit. The veteran might prefer to be in a hospital in his community where he could remain in touch with his family. Under such circumstances the hospital plan would be of no benefit.

Another circumstance of considerable

importance is that the family, or dependents of the veteran in economic distress who accepts hospitalization is left to the aid of community charity. The veteran is disabled. His income has ceased. He has accepted hospitalization in a government hospital. His family is in distress which does not add to his peace of mind.

All the circumstances mentioned above have come under the observation of the writer. Many more might be mentioned, but these suffice to show that the hospital plan is of benefit to a limited group, and not of equal benefit to all veterans, and by no means touches all veterans who are ill and in need.

The insurance plan of benefits proposed in the resolution provides for two forms of benefit:

(a) The payment to the veteran of a sum of money per week during any period of total disability. (A cash benefit).

(b) The payment of a hospital benefit per week during any period of hospital confinement. (A hospital benefit.)

Each veteran would benefit equally. It applies to all alike. The veteran whose illness does not require hospitalization receives his cash benefit and thus his needs are met.

The veteran whose illness does require hospitalization can select the hospital of his preference and without delay obtain admission. He can select the type of service which suits his needs. For example, a ward bed or a private room. He can select his doctor. While he is confined in the hospital he will continue to receive his cash benefit which will take care of the needs of his family.

Under the insurance plan of benefit every veteran shares alike in the benefits. The needs of every disabled veteran is met regardless of the character of his disability, regardless of his location, regardless of whether the illness requires hospitalization or not.

#### *As to the Cost of Administering the Two Plans*

In order to make possible calculations as to the cost of administering the insurance plan the sum of twenty dollars per week is set up as the cash benefit, and



the sum of twenty dollars per week as the hospital benefit.

A capable actuary of large experience, Mr. W. H. McBride, of the National Life and Accident Insurance Company, Nashville, very kindly made the following estimates of disability:

"Number of weeks of disability expected from a group numbering 4,000,000 in 1930, ages 31 to 40, inclusive, in \*successive years, excluding those attaining age greater than 60.

"1931 .....	4,357,291
1936 .....	4,132,507
1941 .....	3,889,594
1946 .....	3,573,334
1951 .....	2,874,558
1956 .....	1,149,620
1959 .....	267,919"

The rates of disability here shown are much higher than would be expected in a group of 4,000,000 veterans of the World War for the following reasons:

The physically unfit are largely eliminated. Certainly veterans as a whole are better risks than any other group of similar numbers that could be mentioned. The mortality experience in the war risk insurance demonstrates veterans to be superior risks as a group.

The disability rate in an industrial group is notoriously high, and the figures furnished by Mr. McBride are based upon his experience with such a group. At any rate, a liberal estimate of the disability rate to be experienced in a group of veterans would be one week of disability per year per man. Four million veterans would give a disability experience of four million weeks of disability per year. The cash benefit to these veterans would amount to \$80,000,000.00 per year.

Assuming that ten per cent of the weeks of disability would require hospitalization, the hospital benefit would cost \$8,000,000.00 per year.

Assuming that the overhead costs of administration would be five per cent of the total benefits this item would amount to \$4,400,000.00 per year.

The two benefits plus the costs of administration would amount to \$92,400,-

000.00 for the first year. The disability rate would diminish each year and the costs would decrease accordingly. By the year 1959 the cost would be negligible.

This form of benefit would cease at age sixty. It is assumed that those veterans who attain an age beyond sixty years would be taken care of by some other form of benefit. For example, a pension or domiciliary care in soldiers' homes already in existence.

#### *The Cost of Administering the Hospital Plan of Benefits*

There are at present fifty-three veterans' hospitals with a capacity of 25,940 beds.

It is estimated by the Medical Council of the Veterans' Bureau that 129,859 beds will be required to meet the needs of the veterans of all wars.

The cost of maintenance is \$4.42 per day, or \$1,613.30 per year per bed.

The average cost of construction is \$3,500.00 per bed.

The cost of the professional staff is \$151.56 per bed per year.

The average cost of transportation to and from the hospital is \$30.58 per veteran admitted.

The cost of equipment is not obtained, but this item is large.

These statements of costs were furnished by the Acting Director of the Veterans' Bureau.

The cost of constructing the 103,939 beds additional to make the total 129,859 would be \$363,786,500.00.

The cost of maintaining 129,859 beds would be \$209,501,524.70 per year.

The cost of the professional staff would be \$19,681,430.04 per year.

The cost of transportation and equipment cannot be estimated.

The cost of two items alone, viz: hospital maintenance and professional staff would be \$229,182,954.74 per year.

These figures furnish ample evidence to show that the insurance plan is by far the more economical of the two.

Under the insurance plan when the last veteran has attained age sixty the plan ceases to exist. The costs have scaled downward through the years until the costs become nil. Under the hospital plan of benefits the costly build-

\*Figure for each five-year period is given instead of each successive year.

ings and equipment are to be abandoned and the staff disbanded, or a new policy concerning their administration inaugurated.

A new policy of administration certainly would be in the interest of keeping the beds occupied and the staff employed. It logically would be in the nature of extending hospital benefits to the families of veterans, and thus the expense could be continued and the scope broadened to the extent that medicine and hospitals in America would become almost completely or very largely federalized, thus making for almost complete state medicine.

Since the resolution was adopted a few criticisms have been made which should be discussed here.

One criticism is that the insurance plan is offered purely in the interest of doctors. Such a criticism is unfounded. In fact, it will be noticed that there is no provision in the policy proposed for medical or surgical fees.

Such a benefit is often found in disability policies written by standard companies. It was purposely omitted because such a criticism was anticipated.

Doctors as a whole would receive a larger financial benefit from the hospital plan. It will be noted that the cost of the staff would be \$19,681,430.04 per year under the hospital plan. Doctors could not hope to benefit to this extent under the insurance plan. In fact, doctors would not benefit directly at all.

Another criticism is to the effect that unethical doctors and crooked veterans would enter into collusion to defraud the government. This is a slam at both doctors and veterans. In reply to this criticism I would say that if such a large proportion of doctors were capable of such crookedness such large insurance companies as the Metropolitan and others could never have been built up. The basis of a claim with any disability insurance company is a certificate by a physician.

Fraud doubtless is perpetrated occasionally. Every business on earth has had its experience with frauds. Even the Veterans' Bureau. The veteran could be hospitalized unnecessarily under the

hospital plan which would be a fraud also, and from the standpoint of the government, a more costly fraud.

It is intended that the Veterans' Bureau force be augmented so as to administer the act. This force would detect and combat fraud. This force disallows the claims of veterans every day under existing laws.

I believe I can say on behalf of organized medicine that we would favor and sponsor any measure seeking to eliminate fraud completely from this and all other forms of administration where a doctor is brought into the case.

Doctors are vitally interested in a matter of far greater importance to the public and the profession than the temporary income of some doctors, and that is the subject of *state medicine*.

Veterans, in my opinion, would be interested if they were to give this matter serious thought.

One form of state medicine is that in force under the government hospital plan of benefits to veterans. It has these elements. The sick individual has no voice in the selection of his doctor—no voice in the selection of his hospital. The doctor does his tour of duty wherever he is assigned. The proper relation between doctor and patient is destroyed. The German system of medicine has this element to a large extent. It was Prussianism we went across the seas to destroy.

In America, medicine and surgery have made more progress than in any other country on earth. The public of the United States as a whole get the best medical, surgical and hospital service of any people on earth. This wonderful system has grown up as a part of our democracy. In this democratic system the patient selects his doctor. The doctor serves those who want him. His clientele grows in proportion to his reputation for good service. The same applies to hospitals.

If democracy in medicine must go—well, then let democracy disappear from the earth altogether as a false philosophy of life and living. Let's apologize for the efforts of our forefathers in establishing a democracy. Let's also apol-



ogize to Germany for the destruction we wrought to their Prussian system.

This insurance plan of benefits to veterans is offered in the interest of all. It is in the interest of veterans primarily. It is in the interest of equality of benefits as between veterans. It is in the interest of economy in governmental expenditures. It is in the interest of democracy in medicine—that system which has brought to the people of the United States the highest type of medical service to be had on earth.

—R—

### A Phase of the High Cost of Illness

W. SINGLETON, M.D., McCracken

Read before the Rush-Ness County Medical Society, June 18, 1930.

The high cost of illness and medical care has been much discussed in medical journals, newspapers and magazines in general. Patients complain of the exorbitant charges doctors have made and of the high cost of hospitalization.

When one comes to analyze the situation as a whole it is apparent that many factors are concerned. According to Rappleye, the average cost per family per year for patent medicines, drugs, physicians, hospitals, nurses and dentists is \$80.00, as compared to non-medical expenditures, such as automobiles, tobacco, candy, gasoline, theaters and movies, soft drinks, musical instruments, sporting goods, toys and games, perfumes, toilet soap, etc., amounting to \$436.00.

The patients are frequently themselves to blame for the high cost. Patients coming to a hospital very often insist upon having the very best and most expensive service.

It is a common thing for women in the doctor's waiting room and those at the club to discuss health and doctors in general, and one frequently hears a woman say that she has spent \$500.00, \$800.00 or perhaps \$1,000.00 for doctor bills during the past year or two. When one comes to analyze this statement one finds the doctor's bill was in reality a small part of this expense bill, the rest being for the hospital, special nurse, medicines, x-ray, laboratory, etc., and

last but not least, the patient, in all probability, has been taking treatments from some over zealous cultist for several months at \$75.00 per month, for the cure of perhaps a diseased appendix, a cystic ovary or some other condition of that sort. And one of these patients will object very seriously to paying a surgeon a moderate fee for an operation in one of these conditions.

A patient who consulted me a short time ago stated that a few days previously he had gone to a chiropractor who, by means of some kind of an "electric box," had diagnosed his case as one of toxic goiter and had charged him \$10.00. He was advised by this chiropractor that he could be cured if he would take treatments for two or three months at \$75.00 per month. I could find no symptoms whatever of a toxic goiter in this man. He had no exophthalmos, no tachycardia, no tremor and no diarrhea. I told him to forget it and charged him \$2.00.

Another patient, a man over sixty years of age, who had a lot of gastric disturbances and whose clinical symptoms indicated a gastric or duodenal ulcer, probably malignant, was examined by one of my colleagues and the diagnosis confirmed. He was advised by both of us to go to a hospital and have a complete and thorough examination made. However, he consulted a chiropractic clinic, took an "electric box" diagnosis at \$10.00 and is now taking two or three months treatment at \$75.00 per month. In a few months he will have the same trouble, but more pronounced and will broadcast to the world that he has spent \$235.00 for doctor's bills.

Another individual presented himself at my office about a year ago, saying that he had something wrong with his throat, that he could not breathe and that he wanted to see a throat specialist. I advised him that I was not a throat specialist. He said that he had spent several hundred dollars in "doctoring" and that he had consulted seven doctors. After questioning the man I learned that his "seven doctors" had been seven chiropractors and that none of them had told him what was the matter with him,

but had given him massage and electrical treatments for "difficult breathing." He was hard to reason with and difficult to manage, but I succeeded in giving him a thorough examination. His difficult breathing was due to a broken cardiac compensation and he had an arteriosclerosis and a passive engorgement of the liver.

My purpose in presenting these illustrative cases is to bring out the fact that from one angle and one phase at least, this so-called high cost of illness and medical care is not all by any means the fault of the qualified practitioners of medicine and surgery.

Possibly some of the high cost of illness may be laid at the door of the physician. Perhaps there is lack of cooperation between the patient and physician, or perhaps the patient himself desires to consult a specialist, and occasionally the physician is not sufficiently interested in his patient.

The man who owns a fine expensive motor car is not likely to permit every mechanic around the garage to work on it. He wants the man who has been properly trained in that kind of work. If the general public would take the same judgment in selecting a man to take care of their health and their bodies as does the man selecting a mechanic for his automobile this so-called high cost of illness would be materially cut down.

—R—

### Ye Vacation of Dr. Pepys

JOHN A. DILLON, M.D., Larned

Up betimes at ye clamour of alarum which did give vent with much vigour at 5 a.m. With great persuasion didst summon ye son from adolescent slumber. Ye much planned voyage to piscatorial mountain waters didst vie with Morpheus for possession of ye youth. Ye elder with prostate urge doth arise much alert nor fain would lieth abed longer. Thus doth ye advance of years render ye time alarum almost of no necessity.

Many dire experiences of previous journeys hath made ye good wife in ye humour to remain at home and methinks she showeth wisdom. Ye speed waggon of much power loaded with accoutre-

ments fitted for ye modern Isaac Walton doth hum merrily across ye western prairies and ye miles of ripened grain portend a fruitful harvest. Alas that ye times of depression permit such mere pittance for ye yeomens' reward. And much is heard berating ye good man Hoover and ye Farm Board. Ye midday brings ye hot wind and ye sight of mountains at eventide doth refresh. Ye rear wheel of waggon doth gather a spike from ye culvert crudely designed by bucolic gentry and with sickening gasp ye tire doth prostrate itself. Ye son with collegiate expletive doeth justice to ye occasion and ye repairs are made amidst torrid environment.

Ye pause is made for sustenance at ye fly-infested inn and scant courtesy extended to ye elder by ye mature flapper of seventeen who serves ye viands. Ye son, stalwart scion that he be, receives attention as one of degree, and ye solicitations of ye dame prove mirth provoking to ye elder.

Ye journey ceaseth only when ye waggon refuseth further ascent and ye purling streams give promise of reward to ye angler. Ye native son with stolid jowl doth profiteer on ye sale of petrol and travelers' needs and ye beds lieth hard. Ye anecdote is heard of ye suppliant who approacheth ye magistrate to have his matrimonial bans annulled on ye grounds that ye father of ye wife had no license to carry a shot gun.

Ye time goeth on fleet wings and too soon ye orgy of eating poorly cooked viands and combatting ye mosquito is past. Ye homeward journey is made and ye good wife is found esconsed in front of ye fan, cool and fair to look upon.

—R—

### TUBERCULOSIS ABSTRACTS

The Twenty-seventh Annual Meeting of the National Tuberculosis Association, held at Syracuse, New York, May 11-14, 1931, was attended by 1,010 registrants. Papers and discussions dealing with the pathological, clinical, social, and administrative aspects of tuberculosis furnished a well balanced program. While most of the papers were of interest primarily to specialist groups, all contributed to our general knowledge of tuberculosis.



All papers, either in their entirety or as comprehensive abstracts, will be published a few months hence in "Transactions of the National Tuberculosis Association." A few high lights of general interest are here presented.

#### TUBERCULOSIS WORKERS REPORT PROGRESS AT ANNUAL MEETING

The opening session celebrated the twenty-fifth anniversary of the Christmas seal, the device which made possible the financing of the tuberculosis movement in the United States. Miss Emily P. Bissell, who introduced the seal in this country, was the guest of honor.

Dr. Livingston Farrand, president of Cornell University, who served as executive secretary of the National Tuberculosis Association from 1905 to 1914, described how the Christmas seal sale grew from \$3,000 in 1910 to \$5,350,000 in 1930. The total receipts from this method of fund raising in the United States have aggregated \$58,640,000. This money has been used largely for the promotion of official measures designed to combat tuberculosis, and by this means there have been secured from the public purse sums that aggregate at the present time close to \$500,000,000. "Christmas seals invested in community organization have resulted in dividends of incalculable benefit."

Emily P. Bissell recounted the origin of the Christmas seal. She was interested in 1907 in raising a few hundred dollars to provide a small sanatorium of 8 beds for consumptives in Wilmington, Delaware. Having read Jacobs Riis' description of the Danish Christmas seal in "The Outlook," she decided to adopt the method. The first seal issued aroused scant interest until "The Philadelphia North American" gave it publicity and proved the possibilities of raising money through the sale of penny stickers. The seal was not a sudden inspiration or a detached idea. As a social worker, Miss Bissell had learned that fairly large subscriptions may be obtained for a worthy project from a few individuals if it is explained to them. But the real public, the people who can afford to give from ten cents to one dollar, are difficult to reach. The Christmas seal makes it

possible for all to participate and also enlists widespread individual interest in the problem of tuberculosis.

#### MEDICAL RESEARCH

Dr. Florence R. Sabin outlined the program of the Committee on Medical Research under the chairmanship of Dr. William Charles White. Under the plan, various universities and laboratories throughout the country co-operate in the solution of carefully outlined problems. All the groups engaged in the work meet frequently and discuss their progress.

One of the projects is that of subjecting strains of acid-fast bacilli, of which the tubercle bacillus is one, to chemical analysis. The essential foundation for such a survey is a synthetic culture medium of known and constant composition free from any protein, complex carbohydrates, and lipoids. The various products of the medium, as well as the chemical fractions of the tubercle bacillus, are submitted to biological tests in order to determine the specific physiological reaction of each fraction or pure substance. For example, saturated fatty acids derived from the tubercle bacillus reproduce typical tubercles in animals. Both proteins and carbohydrates derived from the tubercle bacillus reproduce the toxic symptoms characteristic of the disease. After each new fraction of the tubercle bacillus is isolated, it is tested in the biological laboratory, the end in view being to formulate a complete catalogue of the component parts and their physiological reactions.

Other studies include an investigation into the physiology, particularly the respiration rate, of living tubercle bacilli. One worker has devised a means of isolating a single bacillus and watching its entire life cycle under the microscope. Another group is attempting to standardize the reading of *x-ray* plates and the construction of *x-ray* equipment.

#### NEW DISCOVERIES ANNOUNCED

At the meeting of the American Sanatorium Association, one of the affiliated groups, several important research developments were announced. Dr. E. Fenger of Glen Lake Sanatorium, Minnesota, speaking for the group who participated with him, reported on a new tuberculin

known as MA-100. This is a protein common to all acid-fast bacilli. The combined results of several investigators justified the opinion that the new tuberculin possesses four distinct advantages: (1) it is free from all substances that might render the positive reaction uncertain; (2) it can always be produced at the same iso-electric point in precipitation; (3) it contains nothing except what is manufactured by the germ of tuberculosis itself; (4) it can be diluted in quantity accurately to enable every physician to know exactly how much of the active element he is using.

Professor Charles Weyl of the University of Pennsylvania, technical adviser of a group headed by Dr. F. Maurice McPhedran who are endeavoring to standardize *x-ray* equipment, announced a method of making *x-ray* pictures of the chest so synchronized as to take several short exposures between heart beats. The resulting composite negative produces a clear picture free from blurring caused by the heart's action. Professor Weyl compared the mechanism of the apparatus with that used in a combat airplane, whereby machine gun bullets may be shot between the whirring propeller blades. The device marks a step in advance towards standardizing *x-ray* pictures.

Another advance in the work with the *x-ray* was made public at the meeting by the same group, who have been attempting for several years to eliminate variations in the results obtained with different *x-ray* machines. Differences in lighting and mechanical action of apparatuses heretofore have made the accurate reading of negatives depend upon due allowances for peculiarities known to exist in the operation of the individual machine. For example, pictures made in one city with a certain apparatus would be found, if the patient moved to another city, to be of little use in diagnosing progress of tuberculosis because the second physician would not be conversant with the variables characteristic of the first machine.

By means of an instrument called a "comparator densitometer," designed and constructed by the group making the report, a standard is established which

the operator can use to know in advance of taking the *x-ray* that a certain established density in the picture will be obtained. This enables physicians in different parts of the country to work with *x-rays* upon a uniform basis, as well as reducing the variations that have stood in the way of accurate judgment.

In addition to these developments, it was announced at the meeting that a fixed resistor has been designed which will test the supply of electrical current; also a peak voltmeter for vacuum tubes, and a standard testing apparatus which will help hospitals, sanatoria, and laboratories to choose the *x-ray* machine best suited to their needs.

#### EXPANSION OF TUBERCULOSIS ASSOCIATION

Harry L. Hopkins, director of the New York Tuberculosis and Health Association, discussed the question, "Should the Tuberculosis Association Go into Other Health Fields?" The rapid decline of the tuberculosis death rate and the wide increase of public facilities, such as sanatoria, clinics, health departments, and nurses, warrant the tuberculosis associations in giving serious thought to future programs. The campaign against tuberculosis has by no means been won; an aggressive warfare must be continued, but it should no longer be in the form of direct services rendered. Rather should it be to encourage public authorities to provide funds for adequate sanatorium beds, more tuberculosis clinics, more nurses, and more tuberculosis physicians. Its direct services should be limited to health education, and even here more efforts should be made to induce the public authorities to extend their own facilities. Associations can properly take part in direct activities of a research nature and more particularly those that are demonstrations in character.

Tuberculosis associations, national, state, and local, are admirably equipped to extend their efforts in combating other forms of disease and in promoting positive public health work. Among the projects that have already been undertaken by certain associations are the campaigns against diphtheria and heart disease, the promotion of mental hy-



giene, child health work, and social hygiene.

#### OFFICERS ELECTED

The officers of the National Tuberculosis Association elected for the ensuing year are: president, Dr. Alfred Henry, Indianapolis; vice-presidents, Dr. John H. Peck, Des Moines; and Dr. Willard B. Soper, West Haven Connecticut; secretary, Dr. Charles J. Hatfield, Philadelphia; treasurer, Henry B. Platt, New York City. Officers of the American Sanatorium Association, whose sessions were held simultaneously, are: president, Dr. Harry Lee Barnes, Wallum Lake, Rhode Island; vice-president, Dr. Fred H. Heise, Traudeau, New York; secretary, Dr. W. H. Ordway, Mt. McGregor, New York.

The Trudeau Medal "for the most meritorious contribution on the cause, prevention or treatment of tuberculosis" was awarded this year to Dr. Allen K. Krause.

#### Psychiatric Nursing

A new step forward in the training of nurses has just been inaugurated in the approval of the Menninger Psychiatric Hospital and Sanitarium as an approved institution for the affiliation of student and graduate nurses for special training in psychiatric nursing. The Menninger Hospital was examined by the Kansas State Board for Examination and Registration of Nurses and approval has been granted by these Boards as indicated by a letter received from Miss Cora A. Miller, R.N., Secretary of the Board.

Nurses accepted by the Superintendent of the Menninger Hospital, Miss Sophie A. Schweers, R.N., will be given practical experience in various phases of psychiatric nursing and treatment, including hydrotherapy, occupational therapy, recreational therapy, and the special care of individual patients. They will also be given practical experience with extra-mural cases and problem children cases. In addition to this, didactic work will be offered in the form of lectures in normal and abnormal psychology, mental disease, psychotherapy, and practical psychiatric nursing by mem-

bers of the medical and nursing staff of the hospital.

In a day when it is recognized that more than half of all the patients consulting physicians are suffering from various forms of nervous diseases, it is increasingly essential that nurses have as a part of their training equipment a better understanding of the nature of these illnesses and the best technique in dealing with them.

The duration of the course is three months, the first beginning September 1 and each three months following. Applications will be considered and filed in order of their receipt. They should be addressed to Miss Sophie A. Schweers, R.N., Menninger Psychiatric Hospital, Topeka, Kansas.

—R—

#### Calcification of Intrarenal Arteries Giving Roentgen Appearance of Calculi

George Winthrop Fish and Leonard A. Hallock, New York (J.A.M.A., June 6, 1931), report a case of calcification of the walls of the large intrarenal branches of the renal arteries in such a way that it gave the roentgenologic appearance of calculi or tuberculous calcification. Although calcification of this type has occasionally been noted at the postmortem table, so far as the authors have been able to determine there are no reports in the literature of a case similar to the one they observed and only a few vague references as to the possibility of its occurrence. This case is of peculiar diagnostic interest to the roentgenologist, internist, surgeon and urologist alike, as shadows such as these, though less numerous, are perhaps not infrequently seen, and, when associated with pyuria, hematuria or pain, offer a difficult diagnostic problem between calculus disease of the kidney and tuberculosis. In the light of this case it seems probable that such shadows associated with hematuria have been diagnosed as renal calculi and operations performed that were unsatisfactory to patient and surgeon alike.

—R—

A great many animals laugh, says a scientist. And, of course, a great many people give them good cause to.—San Diego Union.

# THE JOURNAL

of the

## Kansas Medical Society

W. E. McVEY, M. D. - - - Editor

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### AUTOMOBILE ACCIDENTS

It has been but a few years yet it seems a long time since people used horses and buggies for short distance transportation. We thought in those days that there were entirely too many accidents from careless driving and bad acting horses. Most of the accidents were ascribed to the latter. However the horses usually had some sense or judgment, if the driver did not, so that compared with transportation by automobiles the horse and buggy was fairly safe.

There are a few unavoidable automobile accidents but most of them are in one way or another the fault of the driver. Some drivers are reckless and take unwarranted chances, but there are a great many who are simply lacking in judgment. That many accidents result from physical defects of drivers, such as deafness or poor vision is doubtful. It is poor judgment that permits one to drive with a windshield so covered with ice, or water, or dirt that the road ahead is invisible. It is poor judgment for one to pass a car ahead if the road is not clear. It is very easy to misjudge the distance or the speed of an oncoming

car. It is also poor judgment to take the left hand side of the road in going up-hill, and particularly so if the road beyond the top is not visible; and for the same reason it is poor judgment to take the left hand side of the road in rounding a curve. It is just as unwise to drive an automobile on gravel roads without a firm grip on the steering wheel as it was to drive a nervous horse with slack lines. Everyone knows these things and they are being constantly repeated in the newspapers everywhere, but apparently there are people who do not believe them.

In the old horse and buggy days men, particularly doctors, frequently went to sleep on long drives but the horse took them home safely. There were some drivers in those days that would have had less trouble if they had slept all the time. But the man who cannot keep awake when driving an automobile should always travel alone and carry plenty of insurance.

Speed is not so dangerous as it is supposed to be, if the driver is skilful and uses good judgment. A taxi driver in Chicago will take you through the crowded streets at thirty-five miles an hour, with six inches of space between his cab and a street car on one side and another cab or a truck on the other side, but he drives straight ahead, as do the others. If he swerved from side to side as some drivers on the highways do there would be a half dozen cars piled up in the middle of the street. There are people who never learn how to drive straight ahead and until they do learn they will always be a menace to others on the road.

According to the records there are more automobile accidents during hot weather than other times. This is not difficult to understand since for the great majority of these accidents the



drivers are responsible. One who is accustomed to drive an automobile acts automatically when danger threatens. He applies the brakes or turns the car before he has time to think about it, if he is alert. But the driver who is fatigued by long hours at the wheel or is depressed by the heat becomes less cautious and less alert. Situations register more slowly and his response is also retarded.

Driving regulations are plain enough and there are very few people who do not know what they are, but there are too many of them who take chances, who like to take chances now and then. Until some one can endow the automobile with the intelligence of at least a horse there will no doubt continue to be accidents of this kind.

#### DOCTORS NOT BUSINESS MEN

Doctors are proverbially poor business men. That is what a lot of people say and most of them believe. In fact, it is such a common belief that the doctors themselves generally admit it. But one need not necessarily believe it, for the evidence is by no means conclusive.

It is claimed that doctors are "easy marks" for grafters, that they can always be depended on to buy blue sky and gold bricks. But then there are glibble preachers, lawyers and merchants as well as doctors; even bankers have been known to make poor investments. There is really no evidence to show that doctors are more lacking in judgment than other groups of professional men or groups of business men of other kinds. In fact, one could easily collect a considerable list of names of doctors who have proven their ability to acquire wealth, if that is any evidence of being a good business man.

The male population will probably average about so many good business

men to the thousand. Some of these are sure to be found in the medical profession because it appeals to them as a business opportunity. When a good business man takes up the practice of medicine as a business he is almost certain to make a business success of it. There are others, however, who are attracted by the opportunities the practice offers for the acquisition of things more desirable than wealth—to some of them at any rate. And occasionally one who has engaged in the practice of medicine and acquired a reputation for knowledge and skill also accumulates what usually passes for evidence of good business ability, just because he cannot help it, not because he intentionally adopted get rich methods.

What is usually meant, however, in saying that doctors are poor business men is that they do not follow business methods in collecting their accounts. But there is quite a little difference between the practice of medicine and mercantile pursuits. Doctors cannot turn sick people away because they cannot pay cash and have no credit. Merchants can and do, but they would make a great howl about a doctor who so far forgot his duty to humanity. A real business man must forget or submerge his humanitarian instincts, so that doctors as a class cannot in the nature of things be business men.

To say that a doctor is not a good business man is not intended as an opprobrious epithet, but rather as a sort of commiseration. It seems really that people prefer their doctors not to be business men. Who that can qualify as a good doctor wants to be known as a business man.

Business men have done little toward the advancement of civilization. The men with inquisitive minds, the scientists, the adventurers, the explorers, the

men with visions and imagination; these are not business men but they have accomplished things of vastly more importance to the world than its business men.

#### NOT ALWAYS BEHIND

Perhaps Kansas has not been as zealous in providing laws to protect the people against incompetent practitioners of the healing art as we think it should have been, but it has kept considerably in advance of numerous other states in its public health laws.

The legislature of Illinois, which just recently adjourned, passed several laws similar to those that have been in effect in this state for many years.

It authorized municipal corporations, school and county boards to appropriate funds for and employ public health nurses.

It authorized the state department of Public Health to supervise the sanitation of public water supplies, etc.

However, a bill which would have made mandatory the use of prophylactic in the eyes of the new born to prevent ophthalmia neonatorum was vetoed by the Governor, because the attorney general ruled that the provisions set forth in the bill would be unconstitutional in Illinois.

#### IMPORTANT TO HOSPITALS

It seems that the last legislature passed a law which may be of considerable importance to certain types of chartered institutions in this state, such as hospitals, churches and social organizations of various kinds.

The purposes and effects of the law have not been given any publicity and some of these institutions may suffer from a lack of knowledge of its requirements. Mr. Cornell, Secretary of State, has therefore requested that the following statement in regard to the law be published:

All churches, lodges, cemeteries, benevolent, charitable, social and educational organizations which have been incorporated, and which are not organized and operated for pecuniary profit will be affected by a law passed at the last session of the Legislature.

Laws of 1931, chapter 139, provides that such corporations shall make a report to the secretary of state on or before March 31 of each year as of December 31 of the preceding year, giving name of the corporation, name and address of officers, time of annual meeting and other particulars. This report is to be accompanied by a filing fee of one dollar. The act took effect May 28, 1931, on publication in the session laws, and will make necessary the filing of the report indicated for the year 1931 by such corporations, following the close of the year December 31, and before March 31, next following.

As many of these corporations have been in existence for 30, 40 and even 60 or more years without having been required to render any account of their corporate activities to the State, it is manifest that a very difficult task presents itself to the secretary of state, that of getting in touch with the officers who are responsible for the conduct of the business affairs of these corporations. Many charters have been allowed to expire by lapse of time and will have to be renewed before proper report can be filed.

In many cases the title to valuable property such as church, lodge and school buildings, cemetery lots and the like may be dependent on the validity of these corporation charters or the acts of their corporate officers thereunder. All parties knowing themselves to be officers of such corporations should at once communicate with their associates and see that application is made to the secretary of state for blank forms and instructions to be sent to one of their officers at the proper time. Members should see that their officers attend to this matter, as the law provides that in case of failure to report and pay filing fee within the time specified, such corporations are



liable to have their charters forfeited by the State Charter Board.

#### MORE ABOUT THE GENTLEMEN'S AGREEMENT

Some months ago the fact was mentioned in these pages that physicians licensed in adjoining states were practicing in this state without the formality of securing a license to do so, the so-called gentlemen's agreement. Some question was raised as to the wisdom of the policy observed and it was suggested that serious legal complications in this or the other states might possibly arise.

The admission of death and birth certificates signed by non-resident and non-licensed practitioners was already in question at the office of the State Board of Health, and the Attorney General was asked for an opinion on the matter.

The correspondence between the Secretary of the State Board of Health and the Attorney General is reproduced below:

June 13, 1931.

Honorable Roland Boynton,  
Attorney General.

My Dear General:

We would respectfully request your opinion in certain matters in regard to the signing of certificates of death in the State of Kansas.

Under the provision of Chapter 65-130, R. S. 1923, the State Board of Health has "charge of the state system of registration of births and deaths." The board is further "charged with the uniform and thorough enforcement of the law throughout the state and is authorized and directed to make and publish uniform rules and regulations not in conflict with the laws of the state for carrying out the provisions of this act, which rules and regulations shall become effective when published in the official state paper."

Section 65-131, R. S. 1923, provides "that the Secretary of the State Board of Health shall have general supervision over the Central Division of Vital Statistics, but the immediate direction of the

department shall be under the State Registrar of Vital Statistics who is appointed by the State Board of Health."

Section 65-1001, R. S. 1923, provides "for the examination and licensing of physicians," and therefore confers authority upon those physicians licensed by said board to practice medicine in the State of Kansas and sign certificates of death.

Section 65-1005, R. S. 1923, states "Any person shall be regarded as practicing medicine and surgery within the meaning of this act who shall prescribe, or who shall recommend for a fee, for like use, any drug or medicine, or perform any surgical operation of whatsoever nature for the cure or relief of any wounds, fracture or bodily injury, infirmity or disease of another person, or who shall use the words or letters "Dr.," "Doctor," "M.D." or any other title, in connection with his name, which in any way represents him as engaged in the practice of medicine or surgery, or any person attempting to treat the sick or others afflicted with bodily or mental infirmities, or any person representing or advertising himself by any means or through any medium whatsoever or in any manner whatsoever, so as to indicate that he is authorized to or does practice medicine or surgery in this state, or that he is authorized to or does treat the sick or others afflicted with bodily infirmities, but nothing in this act shall be construed as interfering with any religious beliefs in the treatment of diseases; Provided, That quarantine regulations relating to contagious diseases are not infringed upon."

Section 65-1006, R. S. 1923, is quoted in full as follows: "Unlicensed practitioners. From and after the 1st day of September, 1901, any person who shall practice medicine and surgery in the State of Kansas without having received and had recorded a certificate under the provisions of this act, or any person violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall pay a fine of not less than fifty dollars nor more than two hundred dollars for each offense; and in no case wherein this act

shall have been violated shall any person so violating receive compensation for services rendered. It shall be the duty of the secretary of the state board of registration and examination to see that this act is enforced."

Section 65-132, R. S. 1923, authorizes the signing of death certificates in the absence of a regular attendant licensed to practice in the state, by either the local registrar or the coroner of the county.

Section 65-1301 to 1311 inclusive, R. S. 1923, provides for the examination and registration of chiropractors and therefore authorizes their signing certificates of death.

Section 62-1201 to 1206 inclusive, R. S. 1923, provides for the examination and registration of osteopathic physicians, and therefore their authority to sign certificates of death.

Under the sections above quoted, therefore, it is our understanding that only those persons licensed by their respective boards or others designated by the state law and including physicians (M.D.), osteopaths (D.O.), chiropractors (D.C.), local registrars and coroners are the only persons who may legally attach their signatures to certificates of death in the State of Kansas. In receiving the certificates of death from the various local registrars each month, we frequently find signatures of non-resident physicians of the state attached to these certificates. For instance, during the month of January in an examination of the certificates of death received from the counties in Kansas bordering the State of Missouri, exclusive of Wyandotte and Leavenworth counties, and all of the counties on the north border of the state adjacent to the state of Nebraska, we found thirteen certificates of death signed by eleven physicians whose residence was given as Missouri and Nebraska. One physician, whose residence is in Missouri, signed three of these certificates, of the total of eleven physicians, only one of these, a resident of Nebraska, had been licensed to practice medicine in the State of Kansas.

In our examination of certificates of

death each month, we find varying numbers signed by non-resident practitioners. Practitioners from Oklahoma and Colorado also sign death certificates, but in the particular month quoted, we studied only the certificates from the northern and eastern counties. In occasional months there may be as many as twenty-five or more certificates signed by non-resident physicians. Our department, of course, is not charged with the enforcement of the Medical Practice Act, for this duty is conferred by law upon the Board of Medical Registration and Examination.

Death certificates and birth certificates, of course, when properly executed and filed with the State Board of Health, are legal documents, but it is our understanding these certificates are legal only if signed by those persons authorized by the state law to sign them.

We would, therefore, respectfully request your opinion as to the legal status of birth and death certificates signed by physicians who are not licensed to practice medicine in the State of Kansas.

What action, if any, should our office take in regard to these certificates. Should we notify the local registrar to not accept certificates of birth or death where a physician not licensed to practice medicine in the State of Kansas has been in attendance on the case.

Should our department require, where a non-licensed physician has been in attendance on the case, the signature of the local registrar of that particular district in order to make the certificates valid.

What should be our action if certificates of death or birth are received in our office signed by physicians who are residents of this state, although not licensed to practice medicine by the board of medical registration and examination.

We shall very much appreciate your advice in regard to our procedure in such cases as mentioned above.

Very respectfully,

EARLE G. BROWN, M.D.,  
Secretary and Executive Officer.



July 20, 1931.

Dr. Earle G. Brown,  
Secretary,  
State Board of Health,  
Topeka, Kansas.

My Dear Doctor Brown:

I find that, through mistake, your letter of June 13th, 1931, has gone unanswered, and at this time I will submit to you an opinion in regard to the matter which is contained in your letter of that date.

Upon examination of the statute cited in your letter, I find that it is necessary for a physician and surgeon to obtain a license to practice in the State of Kansas. Also that when they are properly licensed, the law authorizes them to sign death certificates.

It is therefore my opinion that a physician or surgeon who is not regularly licensed to practice medicine and surgery in the State of Kansas cannot legally sign death certificates, and that such certificates when signed by a non-licensed physician or surgeon, are invalid and should not be filed of record in your office.

It is my further opinion that your department should refuse to accept death certificates which are signed by non-licensed physicians and surgeons, but in such cases you should instruct the local registrar to furnish the death certificate as is provided in Section 65-135, R. S. 1923.

Trusting that the above opinion answers your question, and assuring you that we will furnish you any further opinion in regard to this matter, I remain

Very truly yours,  
(Signed) ROLAND BOYNTON,  
Attorney General.

—R—  
**CHIPS**

Oppikofer holds that degeneration and destruction of the myoblasts are the characteristic and essential changes in agranulocytosis. He states that the disappearance of the leucocytes is due to the action of some as yet unknown toxin on the myeloblasts.

Warthin claimed that arteriosclerosis

of the coronaries, coronary occlusion, coronary thrombosis, myocardial infarction and angina pectoris are more frequent in latent syphilitic cases than in nonsyphilitic although active syphilitic lesions of the upper coronary branches are infrequent, and rarely produce occlusion of the vessel or lead to thrombosis or myocardial infarction. He made the assertion that sudden deaths from heart failure are almost five times as frequent in syphilitic as in nonsyphilitic cases.

The absence of reaction after small pox vaccination is not evidence of immunity, according to Leake and Force, but indicates an impotent vaccine. According to these writers a papule appears in from one to six days if the subject has never been immunized, but if the subject has been vaccinated before, the papule will appear earlier and in very high immunity the papule may appear in from eight to seventy-two hours after vaccination. These statements offer no explanation for the varying degrees of reaction in a group of persons vaccinated on the same day, with the same technique and with the same vaccine stock.

Liver therapy in the treatment of patients with pernicious anemia must always be regarded as one of the great achievements of medicine. However, there still remains to be solved the problem of etiology. The question whether achilia gastrica should be regarded as cause or effect is apparently still not settled. The experiments of Castle, Townsend and Heath, which were reported in the *American Journal of Medical Sciences* last September, have thrown some further light on the subject. These experiments seem to prove that two factors are involved in the dietary influence upon hematopoiesis and that neither of these factors is alone sufficient. They believe that they have demonstrated the existence of an intrinsic factor which is secreted by the mucosa of the normal human stomach, and their experiments seem, at least to them, to justify the assumption that there is an extrinsic factor which is protein or some closely re-

lated substance. They conclude that pernicious anemia is caused by a deficiency which is not due to a defective diet but is a defect in the patient.

Sodium bicarbonate is such a commonly used remedy and has been commonly used for such a long time that something definite should be known about its physiologic action by this time. In the cases of gastric pain which is presumably due to hyperacidity, sodium bicarbonate is frequently prescribed and usually gives temporary relief at least. Szilard quite confidently asserts, however, that this pain relieving action does not depend upon the neutralization of gastric acidity. He found that chloride values were increased by the administration of sodium bicarbonate in all of a series of forty-four patients, some of whom were normal, some hyperacidic and others anacidic. In patients who were capable of forming hydrochloric acid the chloride appeared in that form, in others it appeared as the neutral salt.

There has been a great deal of study and a considerable amount of experimental work directed toward finding out what the normal function of the gall bladder is. In the May number of *Archives of Surgery*, Ravdin and Morrison present data which seem to show that there are rhythmic contractions of the gall bladder and that concentrated bile is expelled from it by way of the cystic duct. Whatever the normal function of the gall bladder may be, it is apparent that it is of rather slight importance to one's peaceful existence, compared to its abnormal function, or the function of an abnormal gall bladder. It would seem also that among the numerous operations for gall bladder disease a sufficient number of normal organs might be found from which it could be determined, at least, if rhythmic contractions do occur.

There seems now sufficient evidence to justify the conclusion that ulcerative pulmonary tuberculosis in man may be caused by bovine tubercle bacilli which invade the body through the alimentary tract. Although bovine tubercle bacilli

are rarely found in the sputum of patients with pulmonary tuberculosis, a few cases have been reported in which the sputum gave pure cultures of the bovine type of bacilli and autopsies showed cavities in the lungs from which pure cultures of bovine tubercle bacilli were obtained. The evidence does not indicate that infection occurs by contact, but in all the cases the presumption was that infection had occurred through the digestive tract.

That thrombo-angiitis obliterans, Raynaud's disease and other vasomotor and trophic disturbances may be the result of ergot poisoning is suggested as more than possible by Kaunitz in the *Archives of Internal Medicine*, April, 1931. Although epidemics of ergotism do not occur since modern methods of cleaning and milling the rye have been in vogue, the author states that he has examined many samples of rye flour from various regions and has found few that were not contaminated with ergot and some of them contained a considerable quantity. He also states that in patients having thrombo-angiitis rye bread forms a large part of the diet. He compares the conditions found in this group of vasomotor and trophic disturbances with those found in ergotism in human beings and that experimentally produced in animals. He presents for comparison a series of sections from tissues in experimentally produced ergotism and from cases of thrombo-angiitis and Raynaud's disease. He does not claim that his theory is proven but feels that the facts so far developed justify further careful investigation.

————— R —————

## DEATHS

Frederick Daniel Moore, Lawrence, aged 93, died July 30. He graduated from Rush Medical College, Chicago, in 1867. He was Secretary of the Kansas Medical Society from 1877 to 1886. He was elected president in 1886. He has practiced medicine in Lawrence since 1868.

D. E. Foristall, Republic, aged 78, died July 2, of myocarditis. He gradu-



ated from Chicago Homeopathic Medical College in 1878.

Jeremiah Allen Palmer, Erie, aged 65, died June 6 of cerebral hemorrhage following a prostatectomy. He was graduated by the Toronto Faculty of Medicine, Canada, in 1887.

John Harold Powers, McPherson, aged 55, died June 15 of cerebral hemorrhage. He graduated from Kansas City Medical College in 1904.

### SOCIETIES

#### Mississippi Valley Conference on Tuberculosis

The joint yearly meeting of the Mississippi Valley Conference on Tuberculosis and the Mississippi Valley Sanatorium Association will be held this year at the Lowry Hotel in St. Paul, September 21, 22 and 23.

This double conference gathers together medical experts in tuberculosis, public health and social workers interested in the anti-tuberculosis movement from 12 Mississippi valley states. Three days of intensive study on medical and medico-sociological subjects and on Christmas Seal organization characterizes the program.

Among the states participating are Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Ohio and Wisconsin.

This year's program, in the hands of J. W. Becker, St. Louis, program chairman and of Walter J. Marcley, M.D., director of the tuberculosis division, U. S. Veterans' Hospital, Fort Snelling, president of the conference, and E. A. Meyerding, executive secretary of the Minnesota State Medical Association and secretary of the conference, promises to be outstanding among the 18 previous gatherings of the organization's history.

Tuberculin testing in all its aspects; case finding; vital statistics; the problem of tuberculosis in adolescence and the problem of the under-par child all will have consideration at various sessions.

Following is the tentative program of the sanatorium association session:

Monday, September 21—9:30 a.m. to 12:30 p.m. Dr. E. R. Van Der Slice, presiding.

9:30 a.m., "Tuberculin Testing by Districts in Minnesota"—Dr. W. S. Broker, Otter Tail County Sanatorium, Battle Lake, Minn.

Discussion (10 min.)—Dr. Mary C. Ghostley, Lake Julia Sanatorium, Puposky, Minn.

10:00 a.m., "Phrenico-Exeresis in the Treatment of Lung Disease"—Dr. Jerome R. Head, Chicago, Ill.

Discussion.

10:30 a.m., "Increasing Importance of Silicosis"—Dr. A. W. Gray, Milwaukee, Wis.

Discussion.

11:00 a.m., "*x*-Ray Clinic" (To demonstrate the value of serial *x*-ray films in determining the progress of tuberculosis.)—

(A) Dr. G. D. Kettelkamp, Robert Koch Hospital, Koch, Mo.

(B) Dr. C. F. Taylor, Kansas State Sanatorium, Norton, Kan.

(C) Dr. Paul D. Crimm, Boehne Hospital, Evansville, Ind.

(D) Dr. W. M. Spears, Oakdale, Iowa.

Monday, September 21—2:00 to 4:30 p.m. Dr. F. L. Jennings, presiding.

2:00 p.m., "Spontaneous Pneumothorax"—Dr. Max Bisenthal, Chicago, Ill.

Discussion.

2:30 p.m., "Endoscopy in the Diagnosis and Treatment of Non-Tuberculous Diseases of the Lungs" (Lantern)—Dr. Wm. A. Hudson, Detroit, Mich.

Discussion.

3:00 p.m., "Conservative vs. Surgical Treatment of Bone Tuberculosis"—

"Conservative Treatment"—Dr. Robinson Bosworth, Municipal Tuberculosis Sanatorium, Rockford, Ill.

"Surgical Treatment"—Dr. Melvin Henderson, Mayo Clinic, Rochester, Minn.

Discussion.

4:00 p.m.—

(A) "What the *x*-ray Shows in Tuberculin Reactors"—Dr. L. G. Rigler, University Hospital, Minneapolis, Minn.

(B) "Types of Lesions Noted"—Dr. J. A. Myers, Minneapolis, Minn.

Discussion.

Monday, September 21—Evening Session, 8:00 to 9:20 p.m., Glen Lake Sanatorium, Oak Terrace, Minn. Dr. E. S. Mariette, presiding.

8:00 p.m., "Tuberculosis Treatment Plus the Three Rs"—Dr. David A. Stewart, Associate Professor of Medicine, University of Manitoba, and Superintendent of the Manitoba Sanatorium, Ninette, Manitoba, Canada.

8:20 p.m., "The Advantages of Surgical Facilities in a Sanatorium"—Dr. Jerome Head, Chicago, Ill.

8:40 p.m., "Scope and Possibilities of a Laboratory in a Tuberculosis Sanatorium"—Speaker to be determined.

9:00 p.m., "Changes in the Last Ten Years Made in the Sanatorium Treatment of Tuberculosis"—Dr. Walter J. Marcley, President, Mississippi Valley Conference, and Chief of the Tuberculosis Division of the Veterans' Hospital, Fort Snelling, Minn.

Tuesday, September 22—9:00 a.m. to 12:00 m. Dr. Alfred Henry, presiding.

9 a.m., "The Need for Medical Social Service Work in Sanatoria"—Miss Marguerite A. Ridler, Director of Social Service, Glen Lake Sanatorium, Oak Terrace, Minn.

Discussion—Dr. Hoyt E. Dearholt, Executive Secretary, Wisconsin Anti-Tuberculosis Association, Milwaukee, Wis.

9:30 a.m., "Interesting Case Reports" (Each case to include a history, complete clinical information, x-ray records and films, autopsy record, macroscopic and microscopic demonstration.)

(A) Dr. Wm. S. Middleton, Associate Professor of Medicine, University of Wisconsin, Madison, Wis.

(B) Dr. V. V. Norton, Hamilton County Tuberculosis Sanatorium, Cincinnati, Ohio.

(C) Dr. F. L. Jennings, Glen Lake Sanatorium, Oak Terrace, Minn.

(D) Dr. R. H. Morgan, Detroit, Mich.

11:30 a.m., "Tuberculosis in a Rural District"—Dr. Edw. J. Simons, Swanville, Minn.

Discussion (5 min.)—Dr. Herman Hilleboe, Swanville, Minn. (5 min.)—Dr. J. A. Myers, Minneapolis, Minn.

Tuesday, September 22—1:30 to 4:45 p.m. Dr. E. R. Van Der Slice, presiding.

1:30 p.m., "Principles of Out-Patient Work in a Sanatorium"—Dr. Geo. McL. Waldie, Copper County Sanatorium, Houghton, Mich.

Discussion.

1:50 p.m., "Following Up Sanatorium Patients"—Dr. Geo. Thomas Palmer, Palmer Sanatorium, Springfield, Ill.

2:15 p.m., "Does Childhood Tuberculosis Require Hospitalization?"—Proponent—Dr. C. L. Hyde, Springfield Lake Sanatorium, East Akron, Ohio.

Opponent—Dr. C. A. Stewart, Associate Professor of Pediatrics, University of Minnesota, Minneapolis, Minn.

Discussion.

3:00 p.m., "Is the Sanatorium a Safe Place for Nurses?"—Dr. E. S. Mariette, Glen Lake Sanatorium, Oak Terrace, Minn.

Discussion.

3:30 p.m., "Is a Good History 50 per cent of the Diagnosis in Tuberculosis?" (With charts)—Dr. Oscar Lotz, Wisconsin Anti-Tuberculosis Association, Milwaukee, Wis.

Discussion.

4:00 p.m.—

(A) "Tuberculin Reaction—What Is It?"

(B) "Does a Positive Reaction to Tuberculin Mean More Than Infection With Tubercle Bacilli?"—Speaker to be determined.

Discussion.

### American Congress of Physical Therapy

The tenth anniversary session of the American Congress of Physical Therapy will be held October 5, 6, 7, 8, 1931 at the Hotel Fontenelle, Omaha, Nebraska. The Congress has always endeavored to present a program of high quality, and while each year has seen a steady improvement, this year's program is of such a standard that it will be difficult to surpass in the future. Appreciating the desirability of clinics and clinical



demonstrations, the program committee has set aside the mornings for these purposes. It will be the first time that the society will have available ample clinical material for medical and surgical services. The cooperation of the University of Nebraska, College of Medicine, and the Creighton University School of Medicine has made this possible. In the section on Eye, Ear, Nose and Throat, tonsil clinics will be conducted daily during the first three days of the meeting. Electrosurgery for tonsils has found a definite place in the armamentarium of many surgeons. Prominent specialists will demonstrate the various methods and technics now being employed.

The subject of fractures will be thoroughly covered in the surgical clinics. Leading orthopedic surgeons will demonstrate every phase of the work emphasizing the indications and contraindications for physical therapy.

In the medical section and in the medical clinics every allied specialty is represented. The subject of pneumonia will be adequately discussed as will such subjects as come in the fields of pediatrics, gastro-enterology and dermatology. Massage, therapeutic exercise and hydrotherapy will be presented by specialists in these fields.

An unusual feature of this tenth annual gathering is the fact that numerous local and state organizations are leading their efforts for its success. Among these are the Omaha-Douglas County Medical Society, the Omaha Roentgen Ray Society, the Nebraska division of the American Society for the Control of Cancer and several others. A joint meeting with the Omaha-Douglas County Medical Society will be held on Tuesday evening, October 6.

While the sessions start on Monday morning, October 5, the formal opening of the convention will be in the evening of the same day. This gathering will be addressed by the Lieutenant Governor of the State of Nebraska and the Mayor of Omaha. Other speakers of prominence will participate and the evening's program will conclude with a smoker, fellowship gathering and entertainment.

The scientific papers will be read dur-

ing the afternoon sessions. The unusually wide range of subjects and the meritorious papers which will be presented make this program an outstanding one.

The progressive physician who is desirous of keeping abreast of the times can no longer neglect his attendance at a meeting such as this one. While four days is none too long a period for post-graduate instruction one will be able to gather more than inspiration from the valuable clinics and scientific papers. Physicians desirous of having their technicians and assistants acquaint themselves with the newer developments in physical therapy are invited to have them attend this four day scientific meeting. For preliminary program and other information write to the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Ill.

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### BOOKS

Heart Disease by Paul Dudley White, M.D., Instructor in Medicine, Harvard Medical School, etc. Published by The Macmillan Company, New York. Price \$2.00.

This is a very complete text on the subject. The first part deals with the examination of the patient and an analysis of his symptoms and signs; the second discusses the etiological types and causes of heart disease; the third deals with the structural changes present in the heart and great vessels; and the fourth takes up disorders of function. None of the more recent advances in the diagnosis or treatment of heart disease has been omitted. It is well illustrated where illustrations will clarify the text.

Practical Dietetics for Adults and Children in health and disease, by Sanford Blum, M. D., Department of Pediatrics, San Francisco Polyclinic and Post Graduate School. Fourth edition. Published by F. A. Davis Company, Philadelphia. Price \$4.00.

Such changes and additions as have been made necessary by the progress in this field of medicine have been made. A list of the chief sources of vitamins has been added and a discussion of alkaline foods in the treatment of acidosis.

Diagnostic Methods and Interpretations in Internal Medicine by Samuel A. Loewenberg, M.D. Associate Professor of Medicine, Jefferson Medical College, etc. Second revised edition. Published by F. A. Davis Company, Philadelphia, Pa.

Some new material has been added to bring the text up to date. Among the new matter will be found that relating to massive pulmonary collapse, coronary thrombosis and several other conditions which have recently assumed considerable prominence. The book is particularly well illustrated.

Brain Tumors, the diagnosis and treatment of, by Ernest Sachs, M.D., Professor of Clinical Neurological Surgery, Washington University School of Medicine, St. Louis. Price \$10.00. Published by C. V. Mosby Company, St. Louis.

The author was led to the publication of this book by the fact that "none of the standard textbooks on neurology deals with the subject of brain tumors as completely as the subject deserves." He says that brain tumors are not rare diseases but occur so frequently that every physician may expect to encounter them. He excuses his departure from the usual methods of describing the anatomical relationships, but his originality will not detract from the appreciation this book will deserve.

Crippled Children, their treatment and orthopedic nursing by Earl D. McBride, M.D., Instructor in Orthopedic Surgery, University of Oklahoma School of Medicine. Published by C. V. Mosby Company, St. Louis. Price \$3.50.

This book was prepared, as suggested by the author, for the instruction of nurses and the parents and others upon whom the responsibility for the care of these children falls. The instructions are very explicit and excellent illustrations help to make them readily understood.

Hemorrhoids, The injection treatment and Pruritus Ani, by Lawrence Goldbacher, M. D., Second edition. Published by F. A. Davis Co., Philadelphia. Price \$3.50.

The author has made some changes in the technic of the treatment. The anatomy of the rectum and anus are described. Hemorrhoids are classified and the treatment for each class is described. Considerable space is used in the report of cases.

Nutrition and Diet in Health and Disease, by James S. McLester, M.D., Professor of Medicine at the University of Alabama, Birmingham, Alabama. Second Edition, Revised and Reset. Octavo of 891 pages. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$8.50 Net.

This is a subject about which many books have been written and many more

will be written. Many revisions will be required of all of them. This one recommends itself to the student of nutrition, particularly because the author tries to apply the facts so far known to the problem of nutrition. Naturally a good many changes have been required in this revision. It has been brought up to the present general conception of the subject.

Clinical Diagnosis by Laboratory Methods, by James Campbell Todd, Ph.B., M.D., Late Professor of Clinical Pathology, University of Colorado, School of Medicine; and Arthur Hawley Sanford, A.M., M.D., Professor of Clinical Pathology, University of Minnesota (Mayo Foundation); Head of Section on Clinical Laboratories, Mayo Clinic. Seventh Edition, Thoroughly Revised. 765 pages with 347 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$6.00 Net.

This is the seventh edition of this book and it has been thoroughly revised by Arthur H. Sanford who now appears as co-worker with Dr. Todd. Obsolete methods have been omitted. A considerable number of improved methods and of entirely new procedures have been added. The original plan of the book and much of the original text have been preserved.

Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 11, number 2. (Lahey Clinic Number—April 1931) 248 pages with 88 illustrations. Per clinic year (February 1931 to December 1931.) Paper, \$12.00; Cloth, \$16.00. Philadelphia and London.

The reports in this number of the Clinics are contributed by Lahey and his associates. A number of surgical clinics and articles on surgical subjects by Lahey, Clute, Cottell, Vestal and Anderson, are noted. There are several very interesting papers on anesthesia, one by Sise and one by Woodbridge. Hurxthal discusses the use of digitalis in surgical patients. Menard and Hurxthal have an article on painless coronary thrombosis as a post-operative complication. Kiefer describes the treatment of persistent vomiting. Jordan has several contributions on intestinal conditions. Haggart has two very interesting articles dealing with foot strain and painful feet. Hicks' article deals with ureteral calculi. Hoover discusses obstructions of the salivary duct. Warren's paper deals with ascites with ovarian tumors.



New and Nonofficial Remedies, 1931, containing descriptions of the articles standing accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1931. Cloth. Price, postpaid, \$1.50. Pp. 481+LVI. Chicago: American Medical Association, 1931.

This volume is the annual publication of the Council on Pharmacy and Chemistry of the American Medical Association giving the latest authentic information concerning those of the newer medicinal preparations found worthy of the consideration and use of the medical profession. Each year the Council scans the general articles under which the various preparations are classified and revises these to conform to the latest and best medical thought.

A glance at the preface shows that a number of preparations have been omitted because they conflict with the rules that govern acceptance, because their distributors did not present evidence to demonstrate their continued acceptability, or simply because the manufacturers have taken them off the market. Important revisions have been made in a number of the general articles and in the descriptions of various preparations. Among the new preparations that have been found by the Council during the past year to be eligible for admission to the book are: Amytal and Pulvules Sodium Amytal, 3 grains, barbituric acid derivatives for use preliminary to surgical anesthesia; Thio-Bismol, quinine bismuth iodide, sodium potassium bismuthyl tartrate, and Tartro-Quinobine, bismuth compounds for use in the treatment of syphilis; Scillaren and Scillaren-B, preparations containing the squill glucosides; two new cod liver oil concentrates; Synephrine, a new vasoconstrictor, and synthetic thyroxine.

New and Nonofficial Remedies should be in the hands of all who prescribe drugs. The book contains information about the newer materia medica which cannot be found in any other publication.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1930. Cloth. Price, \$1.00. Pp. 91. Chicago: American Medical Association, 1931.

This book is essentially a record of the negative actions of that distinguished

body, the Council on Pharmacy and Chemistry of the American Medical Association; that is, it sets forth the findings concerning medicinal preparations which the Council has voted to be unacceptable for recognition and use by the medical profession. Many of the reports record outright rejection or the rescinding of previous acceptances; others report in a preliminary way on products which appear to have promise but are not yet sufficiently tested or controlled to be ready for general use by the profession.

Among the reports recording outright rejection are those on: Avesan (H), formerly Nuforal, a mixture stated to be composed of formic acid, sodium nucleinate, camphor, allyl sulphide and chlorophyll, with traces of salicin and sulphuric ether, marketed with unwarranted claims of usefulness in the treatment of tuberculosis, asthma, and other respiratory diseases; Ceanothyn, once before rejected and still found to be marketed with unsupported therapeutic claims; Collosol Calcium and Collosol Kaolin, so-called colloidal preparations, the former an unscientific mixture of unproved value, the latter a possibly dangerous preparation, and both marketed with unwarranted claims; Ephedrol with Ethylmorphine Hydrochloride, an unscientific ephedrine preparation marketed under an unacceptable proprietary name with unwarranted therapeutic claims; Farastan, an unscientific iodine-cinchophen preparation proposed for routine use in "arthritis . . . and Rheumatoid conditions"; Haley's M-O Magnesia-Oil, a magnesia magma and liquid petrolatum mixture in fixed proportions marketed with emphasis on the "M-O"; Lydin, a testicular extract, marketed with claims of value in the treatment of impotence; and Metatone, a shot-gun "tonic" mixture marketed under a proprietary name with unwarranted therapeutic claims.

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#### For Diarrhea in Infants

After a starvation period of twelve to twenty-four hours on boiled water or gelatin water ( $\frac{1}{3}$  oz. of gelatin to one

pint of boiled water), the infant should be given Protein S.M.A. (Acidulated) diluted 4 level tablespoons with 9 ounces of water, and without any additional carbohydrate.

1st Day 2d Day 3d Day\*

Severe cases .... 3 oz. 6 oz. 9 oz.

Medium cases .... 10 oz. 15 oz. 20 oz.

Mild cases ..... 15 oz. 30 oz.

After 48 hours or when the stools become normal, SMACO (400) Maltose and Dextrins (Spray Dried) should be added gradually, beginning with one oz. to the quart, and increasing until the infant is gaining steadily in weight. In certain cases, it may be necessary to increase the carbohydrate to a total of 12 to 15 per cent (3 to 4 oz. of carbohydrate to the quart.)

\*Until the proper amount for their age and condition is reached, which is 200 c.c. per kilo of body weight per twenty-four hours, or three ounces per pound of body weight per twenty-four hours. However, the total twenty-four hour intake need not go above thirty-two to thirty-five oz. or 960 to 1050 c.c.

—R—

### The Summer-Time Use of Viosterol

During the hot weather, when fat tolerance is lowest, many physicians have found it a successful practice to transfer cod liver oil patients to Mead's Viosterol in Oil 250 D.

Due to its negligible oil content and its small dosage, Mead's Viosterol in Oil 250 D does not upset the digestion, so that even the most squeamish patient can "stomach" it without protest.

There are at least two facts that strongly indicate the reasonableness of the above suggestion: (1) In prematures, to whom cod liver oil cannot be given in sufficient dosage without serious digestive upset, it is an incontrovertible fact that Viosterol in Oil 250 D is the anti-ricketic agent of choice. (2) In Florida, Arizona and New Mexico, where an unusually high percentage of sunshine prevails at all seasons, Mead's Viosterol in Oil 250 D continues increasingly in demand, as physicians realize that sunshine alone does not always prevent or cure rickets.

Mead Johnson & Company, Evansville, Ind., invite you to send for samples of Mead's Viosterol in Oil 250 D for clinical use during the summer months to replace cod liver oil.

### Delicious Food Drink

Cocomalt, the new chocolate flavor food concentrate, is rapidly gaining favor among the medical profession, as evidenced by its increased sale to hospitals and institutions.

Splendid results have been reported in general cases of malnutrition; but especially among children has Cocomalt convincingly proved its power to quickly add weight to the malnourished child. By actual test Cocomalt adds 70 per cent to the caloric value of milk. Yet it is so easily digested, so readily absorbed, that it is acceptable even to the most weakened digestive system. Furthermore it contains malt enzymes which help to digest the starches in other foods.

The makers of Comomalt particularly wish to remind doctors and nurses that Cocomalt is not a powdered chocolate, not a malted milk, not cocoa, but a scientific food-concentrate of high nutritive value.

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### Theelin and Theelol

The announcement three years ago of the separation of a potent ovarian hormone from the follicular fluid by Allen and Doisy marked a distinct step in the direction of progress. The product had an estrus-promoting activity that could readily be assayed. Other investigators also have been engaged in the study of ovarian hormones, and medical journals carry accounts of a considerable number of products, each designated by some distinctive trade name. A new era was ushered in when Doisy announced, at the thirteenth International Physiological Congress in 1929, the isolation of a hormone in crystalline form. The Council on Pharmacy and Chemistry of the American Medical Association adopted the name "theelin," selected by Doisy, as the nonproprietary designation to be used in New and Nonofficial Remedies for the ovarian hormone made by the process of Doisy. Last year Doisy and his co-workers recorded the discovery of a second estrogenic substance in the urine of pregnant women. It is a triatomic alcohol for which the name theelol has been proposed. Theelin appears to



be approximately twice as active as theelol in adult spayed rats, whereas theelol is six or seven times as active as theelin in immature female rats. It is too early to speculate on the possible uses of these two substances. (J.A.M.A., July 4, '31.)

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### Iron and Copper in the Diet

There have developed evidences that certain minerals which occur in small quantities in natural foods enter into the nutritive exchanges of the organisms in ways more important than has heretofore been believed. For many years claims of the biologic significance of a number of such elements have been heard. They are almost inevitable contaminant of foods, so that it has been extremely difficult to determine decisively whether zinc, nickel, cobalt, manganese, copper and others are chance constituents of the animal organism, or whether one or more function in some essential process. Recently attention has been focused on one of these elements by the discovery that copper possesses the property of supplementing iron in forming hemoglobin in certain types of experimental anemia. Nutritional anemia can apparently be best corrected in several species by the addition of copper as well as iron to the defective rations. There also is considerable evidence that important functions are performed by manganese. Many analyses of foods concerning the mineral content have become available so that the daily intake of these elements may be judged. Wheat bran, blueberries, whole wheat, split peas, and navy beans are rich in manganese. Calf liver, oysters, beef liver, mushrooms, currants and chocolate are rich in copper. Pork liver, beef liver, spinach, lima beans, calf liver, and navy beans are rich in iron. Vegetables and cereals are the chief contributors of iron. Fruits are an important source of all three elements. (J.A.M.A., July 18, '31.)

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### Observations on Efficiency of Commonly Used Hypnotics

G. P. Grabfield, Boston, J.A.M.A., May 30, 1931), describes the observations he made in a comparison of the efficiency of commonly used hypnotic drugs. It oc-

curred to him that a rough index of efficiency might be obtained by prescribing half the amount of the recommended doses and noting the number of doses that were required to produce a comfortable night's sleep. In this way the number of patients used, divided by the number of doses required, would give a rough index of efficiency. If the accepted dose, under such circumstances, was the correct one the indexes should run about 50 per cent. In deciding on the dose either half the pharmacopeial dose or half the dosage recommended by the manufacturer, in the case of a proprietary drug, was used. While the indexes were much higher, this method proved satisfactory. Two series of experiments were done, in the first of which a senior house officer was asked to prescribe the drug by name, and in the second one of which he was given the drug in a numbered bottle to be dispensed in the ward according to a given dosage. The drugs selected are either in the U. S. Pharmacopeia or in the accepted list of New and Nonofficial Remedies. In only one case did the newer drug show any great advantage over the older ones of the same chemical group, and that was in the case of sabromin, which has certain chemical features that differentiate it from other bromide hypnotics, but the slightly increased efficiency does not compensate for the greatly increased cost. From his observations the author concludes that chloral hydrate in small doses and barbital are the most effective and cheapest nonalkaloidal hypnotics available today. He also emphasized the fact that satisfactory results are obtained with much smaller doses than are customarily used.

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"I don't mind washing the dishes for you," wailed the henpecked husband, "I don't object to sweeping, dusting or mopping the floors, but I ain't gonna run no ribbons through my nightgown just to fool the baby."

✦ ✦ ✦

He—That girl is a good swimmer.

She—she ought to be. She's ashamed of her figure.

✦ ✦ ✦

"Pa, you remember you promised to give me five dollars if I passed in school this term?"

"Yes, Bobby, I remember."

"Well, I just want to tell you that you ain't gonna have that expense this time."

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### The Sinus Problem

H. E. MARSHALL, M.D., Wichita

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

In spite of the tremendous advances that have been made in the diagnosis and treatment of nasal sinus disease during the past quarter of a century, I can recall just now no subject in medical literature upon which there is so much difference of opinion and in the discussion of which so many different methods of treatment are advocated as we find in the pages of journals of oto-laryngology on this subject. Even rhinologists take extreme views and argue, more or less good naturedly to be sure, among themselves as to how these cases should be handled. We are all very frank in admitting that our methods are not ideal.

Medical literature, even at its best, is not particularly exciting, whether presented by the human voice or conveyed through the medium of the printed page; and I perhaps am not the only person in the room who has taken refuge in deep slumber during the presentation of a paper which was too long, too dull, or too prosy. For this reason I want to discuss the sinus *problem*—not sinus disease, and I want to present a new and perhaps unusual phase of the subject.

In 1784, Dr. Buchan, F.R.C.P., of Edinburgh in his book the title of which is "A Treatise on the Prevention and Cure of Disease," wrote these words: "Every persistent cold is a kind of a fever. No age, sex, or constitution is exempted from this disease; neither is it in the power of any regimen to prevent it. Indeed if the human body could be kept constantly at a uniform degree of warmth, such a thing as catching cold would be impossible. But as that cannot be effected by any means, the perspiration must be liable to many changes. Such changes when small, however, do not affect the health; but when great,

they must prove hurtful." Now I dare say that could Dr. Buchan repeat those very words before us here today—after all that has been accomplished by the research, investigation, and experimental work of the past 146 years—he could still defy any of us to differ from him. The natural deduction would seem to be then that sinus disease is probably after all not so important as a disease as it is important as a problem.

It is our problem—I mean a problem for the medical profession; because from cephalic to caudal, from dorsal to ventral its deleterious influences contribute to the livelihood of not only the oto-laryngologist but also to the livelihood of the ophthalmologist, the internist, orthopedist, general surgeon, the urologist, the pediatricist, and the man engaged in general work. Even members of the various cults have been called upon to treat and cure nasal sinus disease or some of its by-products.

It is not only our problem, but also a problem of the laity. People have come to recognize the presence of sinus disease from their own symptoms. They no longer tell us that they have "catarrh" they state that they have sinus disease. At times it seems to me that they have been almost overeducated in this respect. At any rate, they recognize their symptoms and make a diagnosis. Furthermore, there is developing more and more each day a more or less universal prejudice against any and all forms of intranasal surgery.

These patients have believed for some time that no local or general medical treatment can bring relief, and that any surgical procedure is a dire calamity. And this prejudice is not confined to the laity alone; as is evidenced by the fact that many patients, when told that operative interference is indicated to alleviate or eradicate the symptoms which cause them to seek relief, invariably state



that they don't want any cutting done. They have been advised against such by friends, usually; but occasionally this advice has come from their family physicians. This again proves that it is a problem.

Now let us look about and see where we stand. Perhaps, at least for diplomatic reasons, the first chip should fall upon the rhinologist. Let it be understood at the outset that no one is more willing than am I to admit that any form of suppurative sinusitis which demands repeated operation with, I shall say, a minimum of relief, does have a tendency to create a pessimistic temperament on the part of that patient. We must also remember that the poorer the result following surgery, the less satisfied the patient; and that the volume of the chorus of dissatisfaction varies in direct proportion to the quantity of dissatisfaction.

This pessimistic attitude on the part of the patient is undoubtedly the greatest hindrance encountered in effectively dealing with nasal sinus disease, and much can be done by the rhinologist to erase it from the mind of even the self confessed skeptic. More careful study of cases and more elaborate methods of diagnosis have already accomplished much in that direction. It is very gratifying to be able to realize that each day fewer patients presenting symptoms which could result only from an involvement of one of the larger sinuses are being subjected to septal resections for inconsequential deviations. Fewer of these patients are being subjected to ethmoid exenterations because of the presence of muco-pus or polypoid tissue in the middle meatus, the cause of which really has its inception in a diseased antrum. And, conversely, it is gratifying to know that more and more each day careful study of cases is resulting in relief for patients with mild ethmoid infection or what appear to be innocent deviations of the septum by the correction of these conditions, instead of erroneously resorting to ineffectual surgery of the larger sinuses.

We must remember that although these operations may seem almost trivial to

the surgeon, they represent much to the patient in time lost, money expended and general discomfort. They are justified, therefore, only after more conservative methods prove futile. There must always be something firm upon which to stand. For instance, there is no more excuse for cleaning out the ethmoids and opening the sphenoid to cure a headache in a patient whose malady is caused by a third degree retroversion with prolapse than there is an excuse for opening the abdomen and doing a suspension to eradicate a headache the etiology of which can be found in an obscure sinus infection. I believe that these two things have occurred—especially with female patients.

Fortunately every abdominal cavity opened for the purpose of removing the appendix does not reveal a blown-out, hypertrophied organ floating about on the surface of pus or fluid which fills the abdominal cavity. So also is it true that the great majority of the infections of the nasal accessory sinuses are non-suppurative and lend themselves well to treatment or surgery. The symptoms are more often a result of qualitative rather than quantitative disturbances. The sinus infections which are really responsible for morbidity are not those characterized by pain over the affected sinus, fever, marked irritability, enormous quantities of pus from the sinus. Many of our most disappointing moments have come when, after a careful history and with a well balanced mental picture of a stream of thick yellow pus exuding from the region of the ostium of the suspected sinus, upon looking into the nose carefully, we find little or nothing abnormal. Even after thorough shrinking, looking again, suction and another look, and perhaps even after irrigation of the sinus scarcely enough evidence is procured to justify treatment, our chagrin is paramount, until the patient returns a day or two days later obviously improved and begging for more.

Such things happen, and if disease is present and we do not find it, or if we erroneously think we have found it and misplace our surgical or therapeutic efforts, we do unquestionably add to the

army of malcontents, and this army denounces nasal surgery with vehemence.

Now I have admitted, confessed, and repented. Is there no vindication? Suppose treatment has shown a non-suppurative condition of the maxillary sinus to be chronic and persistent, should we hesitate to clear up the condition by operation because we fail to demonstrate an abundance of free pus? The general surgeon is surely justified in removing an appendix which, while having given symptoms and having shown signs of an appendicitis, has not ruptured, shows no abscess, or may even show no free pus. He bases his diagnosis on the symptoms of a low grade infection, and it is considered, and is, sound surgical judgment. So also are there low grade sinus infections, non-suppurative if you please, which contribute immeasurably to morbidity and which can be eradicated by sinus surgery.

Sinus surgery fails. An antrum window will sometimes close. The failure of an intranasal window to permit an antrum to drain and ventilate properly is probably because the window closes. Just as true as an adhesive band following a laparotomy, if it constricts and occludes the lumen of the bowel, will cause an intestinal obstruction. Yet no one can condemn abdominal surgery on that account. Understand I am making no attempt to minimize the value of general surgery; I mention it only as a convenient means of comparison. I have had some experience with it. After two attacks of pain in the right lower quadrant, nausea, vomiting, rigidity, etc., I submitted and my appendix was removed. The pathological report mentioned something about its being somewhat elongated, slight dilatation of the vessels of the serosa, and apparently some round cell infiltration of the submucosa. Nothing very exciting to be sure, but I have never had any more belly pain, the operation cost me nothing, and I am pretty well satisfied.

But to get back to sinus surgery. The sinus surgeon gets credit for a great many things for which he is not responsible. The nose is a sensitive organ, its physiological function is easily

disturbed, and when once disturbed, it may not return to normal for days, weeks, or even months. This can be proved to your own satisfaction.

I would suggest that you take a long glass bead about the size of a date seed, sterilize it if you like, then insert it well into either nostril. Push it back until it comes to rest snugly in the middle meatus. Now leave it there for forty-eight or seventy-two hours, then remove it or have it removed. No surgery has been done, no additional infection has been introduced. Yet for days, or weeks, or months, or perhaps even forever, your nose will not feel normal. Now it is this abnormal feeling for which the sinus surgeon is too often blamed. It is quite probable that if the complaining patient would think less of his nasal sensorium and more about the absence of secretion, odor, cough, headache, or would think more about the improvement in his general condition, he might soon forget the dry, or cool, or tickling sensation in the nose which prompts him to condemn forever as unsuccessful any and all forms of intranasal surgery.

Submitting to intranasal surgery or treatment is about as thrilling to the average layman as are repeated visits to his favorite dentist. We are all human at that, and so long as we can blow our noses, breathe fairly well at least during our waking hours, get over our colds if we are susceptible, clear out the infected material which drops down into the lower respiratory passages, why should we crave the services of a rhinologist. Perhaps we should not. Yet, such changes in perspiration, when little, do not effect the health; but when great, they must prove hurtful.

In conclusion I would like to say that my plea is not for more and bigger sinus surgery. It should never be employed until all conservative methods of treatment have been tried and found wanting. Much of the dissatisfaction which follows nasal or sinus surgery is not due to failure to clear up the actual disease, but to the abnormal sensations and to over-indulgence by the patient in mental gymnastics regarding these abnormal sensations.



I believe also that many of sinus surgery's bitterest foes are those people who have never had to submit to it but have heard a lot about it.

It is a problem, and I believe that the best way to meet the situation is to plead for thoroughness and conservatism on the part of the rhinologist, broadmindedness on the part of the profession in general, and whole-hearted instruction of all patients regarding nasal hygiene and prophylaxis. Then all this should be seasoned with a hint that in case one does have sinus infection, it is not necessary for him to fold his hands, wrap the drapery of his couch about him, and lie down to pleasant dreams.

### R Vitamins

JAMES A. WHEELER, M.D., Newton

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

It has been said that the selection of food in Methuselah's time was a very different problem from the one which confronts the housewife of today for living was not so complex. There is an old adage that, "we should eat what we find on our plate," not worrying about vitamins. But this we can do only when we know that the one preparing our food understands the fundamentals of the science of nutrition.

These fundamentals are not at all difficult to understand, either by laymen or physicians and it is along this line that I wish to discuss vitamins and not try to review the great amount of research work that has been and is being carried on at the present time. I believe that it is possible for the practicing physician to utilize what knowledge we have of vitamins to practical advantage in his practice.

It has been said by several prominent men in medicine that physicians should keep dietetics in the hands of physicians where it belongs and not in the hands of naturopaths and dietitians. Dietitians should work under the direction of physicians. This can be done only when the doctors take sufficient interest in this work that they may advise their patients of the simple fundamental principles to follow. The laymen have been taking

the diet question for the past ten years very seriously, and I might say too seriously, while on the other hand the physicians in general have not taken it seriously enough, at least in proportion to the recent knowledge gained on the subject.

Ladies' magazines, journals and daily newspapers along with radio talks, especially by Dr. Copeland of New York, are either writing or talking of diet and vitamins. Every leading magazine carries large advertisements in regard to yeast and its relation to health. They further state in their advertisements "See your doctor for further information on vitamins." Unless the profession gives enough time to this subject to familiarize themselves with the essential details, the laymen will soon turn to other sources for information, and if that is done, it will not only take it out of the physicians hands but it will soon become unscientific and over run with exaggerated statements.

This subject has taken a definite place in the large centers and hospitals and among our prominent internists. There is no reason why a general practitioner should not know all that is needed to be known about vitamins. There is no question but what they have a definite relation to our daily health and especially in the young growing individual.

One of the most popular words in the English language today is the term vitamin. It is used to designate a group of substances which are necessary in the diet. If one were asked the essentials of an adequate diet 25 years ago, the following would have been named; protein, fat, carbohydrates, mineral matter and water. But now in addition to these five we know that there are at least six substances called vitamins (A, B, C, D, E and G) which are essential in the diet. There is no vitamin F at the present time. However, they are anything but A, B, and C, for unlike chemicals no one has been able to analyze them or tell what they are made of. In this paper I intend to discuss only vitamins A, B, C, and D.

Animal experimentation has accounted for the advance in our understanding of what constitutes an adequate diet. The domesticated rat and the guinea pig may be restricted to purified diets and the effects noted and in this way these little animals have contributed to our understanding of the fundamentals of nutrition.

Literature tells us that "Primitive man has been sufficiently industrious in most parts of the world to secure for himself food of varied kinds such as fruit, roots, meat, fish, eggs, cereal grains, legume seeds, milk and eatable leaves, the choice of foods depending upon his locality. From very early time man has tended flocks and herds which in turn provided him with food and clothing."

Phases of life owe their existence to the ability to adapt themselves to their surroundings. Hence the Eskimo in Alaska, for lack of sunshine during the dark period consumes large quantities of fat in the form of blubber and cod liver oil. On the other hand the Pigmyes of the far south who live in the deepest jungles where scarcely a ray of sunshine ever penetrates, are found to be dwarfed in stature, with dry skins, and the children looking like old men. These people do not have access to the oils of the north to take the place of sunlight but live principally on herbs and wild pig which is known to contain little of vitamin D in its fat. Just what part the living conditions of these strange people play with their physical condition, scientists have only recently been able to study.

It is only with great danger that a white man dares venture so deep in the jungle and face these people, for they are very treacherous. Other tribes who live near by but have plenty of sunshine with the same type of diet, develop into large people. The question has been asked what part does vitamins play on the intricate system which helps to control growth. Pigmyes have not always lived so deep in the jungle but have been led there for protection by their chiefs, and history proves they have grown smaller by these living conditions and

are fast becoming extinct. In the one case we have a race of men who have adapted themselves to their surroundings and they continue to propagate their race. The other people have gone into unnatural surroundings and failed to compensate for themselves and are fast becoming extinct.

When one spends a few hours daily in the sunshine, uses a moderate amount of meat and eggs and a quantity of vegetables, the diet will contain a great abundance of all vitamins except vitamin D, which will be obtained from the sunshine. We have only recently appreciated the balancing of milk, fruit and leaves in the diet.

Our living conditions have changed a great deal in the past 20 years. Where once the great majority of people killed their own beef, raised a garden in the summer time and gathered fruit in the fall, we are now going to the grocery store, meat market and the dairy. A good cow was once a very essential asset to a man with a family, rich or poor. Today the poor man with a family is making out on a quart of milk a day. If milk is to be stressed as one of the main foods for the growing school child, how can a family with 4 or 5 children keep up the physical standards set by our Health Board on one quart of milk per day? How can the small wage earner meet this demand? The answer might be for him to go back to the old method and keep a cow.

One of the prizes awarded for the most scientific work in medicine in 1930 was awarded for the work done on vitamins. This fact alone shows that the study of vitamins has reached a definite scientific stage and is being given serious consideration in medical research.

Some of the most recent research work on cancer proves what an important part vitamins play in the new growths, especially in the malignant type. In a recent address in Wichita before the Sedgwick County Medical Society one of the heads of the cancer research work in St. Louis stated that the vitamins have been definitely shown to have a great part in the production of new growth. Just how much benefit



this will prove to us in advancing the work in cancer research depends upon further investigation. Their work has brought out that vitamin B is thrown out from the cancer cell and is capable of generating growth at a tremendous rate. They further state that by experimenting with the fluid obtained from an embryo pig which consists mainly of vitamin B it is shown to be capable of causing cells when placed in this embryonic fluid under the microscope, to multiply at a tremendous rate before the eye. It is shown further that the fluid from the cancer cell is the same as the embryonic fluid proving that they are both vitamin B. As a control for this experiment the cells were placed in saline solution without any movement or multiplication, and as vitamin B substance was gradually added, movement began and a large reproduction ensued. There is a theory that has been practically proven that the rate of normal healing from an injury depends upon the vitamin B substance throwing in new growth and new skin. Neoplasms are the result of over production of vitamin B substance probably due to some irritation or by predisposing depleted body conditions. The effect of irritations is very readily shown by the use of *x*-ray and radium. Small doses of either one of these actually start up an excess of secretion. This explains why inadequate doses sometimes cause more rapid growth of tumors. Large doses seem to stop cells secreting and actually alter the cell.

Vitamins A and D are supposed to have a balancing effect upon vitamin B, and the doctors are of the opinion that all of these cases that are treated with *x*-ray and radium and given a diet high in vitamin A and D plus cod liver oil, seem to do a little better. They advise us to continue all treatment known to-day, warn against irritations, encourage the building up of the body in general by diet, especially vitamin A and D. They suggest it may be possible that they will show that the underlying cause of cancer may be a vitamin disturbance, along with a deficiency. A speaker at the Southwest Clinic said that in a talk with a

worker in New York, whose life work has been the study of cancer, he is convinced cancer is not caused by an infection but rather from the cell itself.

Sherman L. Davis, professor of physiological chemistry of the University of Indiana, who is recognized as an outstanding authority on dental nutrition and who has been giving vitally interesting lectures in dental groups throughout the country says that tooth decay is known to result from several factors, chief of which are: (1) lack of care of the mouth. (2) Acid saliva. (3) Prolonged calcium and phosphorus deficiency in the diet. (4) Vitamin D deficiency. He states that when the diet does not contain adequate amounts of calcium and phosphoric acid for both bone and tooth nutrition the vital processes of the body will draw these materials from the bones and teeth. To prove this, in a recent experiment at Georgetown University, a young man voluntarily fasted for thirty days, taking nothing but distilled water into the body. Careful check of the urine was made and it was shown that calcium and phosphorus were thrown out in the same amounts as when he was on a test diet of food before. This disproved the old theory that the amount of calcium and phosphoric acid depended upon the intake of food. It further showed that the amount of phosphorus and calcium far exceeded that which could have been given up from the muscles, therefore it was drawn from the bones and teeth. The daily physiological requirement for an adult of average size is about 15 grains of calcium and 22 grains of phosphorus.

According to Dr. Davis, an examination of about 3,000 family dietaries in the city of Indianapolis, Indiana, showed that about 700 were decidedly deficient in either calcium or phosphorus or both. Such a diet must inevitably produce dental decay. This interpretation is substantiated by historical findings. A group of people, whose diets consist chiefly of cereal, grains, starches and sugars, always have an abundance of decayed teeth. This is due to the fact that such foods are very deficient in

calcium. Experimental evidence has shown that the presence of vitamin D is necessary to establish and maintain the calcium and phosphorus. In his article he brings out strongly the fact that it is no longer necessary for the expectant mother and the growing child to have tooth failure. Those in charge of confinement work should especially stress in their pre-natal care a diet high in calcium and phosphorus, plus vitamin A and D. If 700 families out of a thousand in the city of Indianapolis fail to have an adequate supply in their diet it is unreasonable then to tell people to go home and eat a wholesome diet. The question is what consists of a wholesome diet. He brings out the poor policy of putting in a large amount of dental work consisting of fillings and inlays and have them loosen and fall out due to the farther inroads caused by dental decay. In one hundred children between the ages of six and ten, they were not only able to stop the advancing decay in their teeth but after six months a hardening of the dentine and healing began, also they noticed increased weight, increased energy, increased resistance to colds and improved nerve functioning.

Our foods fall in certain groups, for example: Seeds, tubers, roots and leaves; glandular organs such as liver, kidney, eggs and milk; muscle cuts of meat such as ham, roasts, chops and steak; etc. Within a certain limit our food, in a group, is interchangeable with another. It has been known for many years that diets of a monotonous character have produced diseases in man. Medical history tells us that Hippocrates in ancient medicine said, "there are many ills different from those of depletion but none less dreadful arising from the deficiency of diet."

The following specific diseases result from faulty diet: xerophthalmia, beriberi, scurvy, rickets and its many forms, and pellagra. A form of sterility has been produced in rats by restricting them to certain incomplete diets. I want to emphasize that no drug, patent medicine or tonic, will aid these conditions. A proper selected food is all that is necessary to cure them. For ex-

ample, xerophthalmia is due to lack of vitamin A in the diet. In the laboratory examination when small rats are restricted to a diet free from vitamin A, there develops after a few weeks, a condition of the eyes which is called xerophthalmia. This means that the eye ball is dry and lusterless, an ulcer forms on the eye ball which causes it to rupture and the lens comes out. When this occurs blindness is the result in the rat. If during the early stage of the condition a source of vitamin A such as butter fat or cod liver oil is given, very quickly the eyes return to their normal condition. The production of this disease in laboratory animals has brought about an understanding of xerophthalmia in man. Many adults and children have become blind as a result of being fed too low in vitamin A.

A review of literature shows as early as 1892, a physician reported that when children who had had measles, or whooping cough with bronchitis and there had been serious exhaustion, a front portion of the eye ball not infrequently became damaged by ulcers. It is well known that a child may lose sufficient food during whooping cough to cause serious malnutrition. It should not be lost sight of that the child may border on such serious conditions as those mentioned under vitamin disturbance.

An English physician described fifty children living in the vicinity of Copenhagen during the years of 1912 to 1915, most of the infants of less than one year of age were suffering from severe malnutrition as was shown by their dry, scaly and shrivelled skin. Their diet consisted of separated skim milk which was practically free from fat, together with oatmeal gruel and barley soup. A physician in 1904 reports about 1400 cases of xerophthalmia occurring among children from the ages of 2 to 5 in Japan. The disease there is known as Hikan. It is stated that these children suffered from diarrhea in the summer in addition to their eye diseases. The diet had consisted of rice, barley, beans, cereals and other vegetables, a marked lack of vitamin A.



A physician in Baltimore had four cases in children 7 years of age. Three died but the fourth recovered when given cod liver oil. Cases of night blindness have been reported in this country among prisoners or men working in gangs and fed on a common diet too low in vitamin A. When butter fat or cod liver oil was added to the diet, their sight returned. This is very closely associated with xerophthalmia and has been noted in horses for many years.

At the present time the United States government has a problem of xerophthalmia among the Indians in New Mexico and there has been a number of cases in both children and adults. Government physicians are combating it with cod liver oil and high fat diets which the Indians do not have at their disposal. I have recently seen twin children with this condition. The children made complete recovery after the administration of cod liver oil.

Beriberi is a disease due to lack of vitamin B. It is not common in the United States. A few cases have occurred in jails and insane asylums, due to the inadequate diet of the inmates. The disease is characterized by degenerative changes in the nervous system often combined with dropsy. First symptoms to be noted are fatigue, depression, numbness and stiffness of the legs with more or less swelling of the face and ankles. It occurs in two forms, the wet and dry. I believe that I have seen a case of beriberi in this vicinity which made a recovery and who later developed symptoms of pellagra, which also was cured by yeast and a high vitamin B diet. This girl would not eat and vomited frequently. Also have seen a case of pellagra in the hospital following extreme vomiting over a period of time.

Scurvy is due to a lack of vitamin C in the diet. The vitamin is found more abundantly in most fruits and vegetables, which I will show on the chart. Scurvy is also an old disease and for many years its cause was unknown. In writings of Hippocrates it is stated that "soldiers frequently suffered from pain in their legs and gangrene of the gums." They were probably suffering from

scurvy. It was apparently unknown to soldiers of ancient times, when their voyages were short, but after the science of navigation made long voyages possible, scurvy became the terror of the seamen. Scurvy develops gradually. When an adult is deprived of vitamin C it takes from four to seven months for the disease to develop. In children it takes less time. However, a case that I wish to show here is in a child one year old and literature shows that the average age is around one year. The adult loses weight, is anemic, pale, and weak and short of breath, the gums become swollen and bleed easily. Modern knowledge of the cause of scurvy dates back to 1912. It was found the disease could be readily produced in guinea pigs when fed on a diet consisting of bread or cereals. The condition could readily be controlled by supplying vitamin C.

One of the most astounding things about the treatment of scurvy, especially in children, is the rapid rate at which they respond to the treatment. Nearly all authorities agree that in from 48 to 72 hours you will notice a great change in the patient. It is so rapid that it is nearly unbelievable. The main interest in scurvy has been in the past 25 years, due to the practice of artificial feeding of infants. Scurvy has occurred in breast fed infants when the mother was on a very inadequate diet. It occurs in bottle fed infants who receive for many months a diet limited to either raw or heated cows milk, either with or without addition. The babies grow pale and fretful, they fail to gain in weight, there is great tenderness of the arms and legs and perhaps tenderness of the gums. Usually the first sign is bone tenderness in any part of the body.

When a baby receives a small but insufficient amount of vitamin C, marked scurvy does not develop, but there is a disturbance in nutrition which is even more serious since it may not be recognized as being due to faulty diet. The baby may become pale, lose its appetite and cease to gain in weight. This condition has been called latent scurvy and according to Dr. A. F. Hess of New York City, it is more to be feared than

severe scurvy since it is so often not recognized. Nearly all children receive some orange juice or tomato juice but a great many times it is neglected. There is no longer any excuse for the occurrence of xerophthalmia, beriberi or scurvy. A diet containing a liberal amount of milk, fruits and vegetables is all that is necessary to prevent these distressing conditions.

One of the conditions that I wish to speak about, due to vitamin D disturbances is tetany associated with low calcium rickets. One of the most interesting symptoms of low calcium rickets develops when, as a result of very ac-

tive rickets, there is a marked depletion of body calcium. This may be seen at any time of the year but most frequently in the later winter and spring months. Hypertonicity of the general skeletal muscles consists of the early and more common symptoms, arms and legs more rigid than they should be, severe cases may have practically spastic while others may have spasms of hands and feet. If the mother jerks the cover from the bed suddenly or there is a sudden loud commotion, quivering of the child's arms or legs may be caused and its jaw may quiver when it cries. Hypertonicity and slight local spasms often merge finally

## VITAMIN CHART

Vitamin "A"	Vitamin "B"	Vitamin "C"	Vitamin "D"
Promotes Growth Prevents Eye Conditions of Infancy Promotes Bone Development Xerophthalmia Types of Diarrhea Respiratory Infections	Promotes Growth Promotes Appetite Specific for Pellagra and Beri-Beri Protects from Restless- ness and Bone Pain Antineuritic	Protects from Malnu- trition and Scurvy Promotes General Growth and Well Being Dental Caries	Protects From Rickets Soft Bones Poor Teeth Tetany Osteomalacia Calcium Disturbance Gastro Entero Spasms to Certain Skin Conditions Maintains Phosphorous Balance
Protective Foods	Protective Foods	Protective Foods	Protective Foods
Cod Liver Oil Cow Butter Carrots Pineapple Egg Yolk Cream Tomatoes Spinach Milk Meal Etc.	Cereals Yeast Products Whole Grain Flour Whole Wheat Milk Nuts All Nuts Almond Butter Legumes Egg Yolks Spinach Potatoes Beans Peas Corn Pears Apples Tomatoes Etc.	Fresh and Raw Oranges Tomatoes Grapefruit Lemons Cabbage Lettuce Onions Pineapple Raspberries Turnips Pumpkin Carrots Bananas Figs Etc.  Vitamin "C" is Killed When Heated in the Presence of Oxygen.	Cod Liver Oil Egg Yolk Vegetables Whole Milk Cow Butter Etc.  Natural Sunshine and Artificial Sunshine



into convulsions. They are usually precipitated by fever, as when the baby is cutting his teeth or developing an acute infection. Rachitic tetany is the cause of nine out of ten convulsions in children. They may have as high as 12 to 14 spasms a day. Laryngeal spasm is a crowing noise in inspiration, much like the whoop in pertussis. It may be more or less constant but is usually heard only when the baby is crying. One of the easiest signs is the facial spasm. The baby's fingers may be quite rigid in what is known as the obstetrical position. The thumb is turned in and the fingers usually clinched over them. You may notice a fine quivering spasm of the fingers. The toes will turn down, sometimes nearly touching the soles of the foot. The baby's eyes become fixed and the spasm may last from only a few seconds to a minute or two. It is not often thought of by the laymen as a spasm. I have seen cases that were never recognized until the mother's attention was called to it and then she said that the baby had been having the same spells for partially two weeks. Older children with tetany will have a tendency to have convulsions with little fever, which often persists until they are six or eight years old. Such a case as that I have seen this past winter, due to upper respiratory infection producing recurring fever, causing the child to have a spasm every time it had fever. This condition is often mistaken for epilepsy. However, this child so far has made a complete recovery on removal of infection and administration of a high calcium D diet. I want to say that vitamin D is specific for this condition. Without it, you may not expect results from any sort of a sedative, but with the proper treatment you can expect fairly rapid results. Sometimes within four or five days you may control convulsions which have lasted two or three weeks. I have seen in the past year and a half about six cases of tetany ranging from five weeks to seven years.

You will notice from the arrangement on the chart the diseases produced by lack of the different vitamins and the protective foods listed in each column

beneath. I wish to say in conclusion: (1) that the question of vitamins is a new problem for the general practitioner as well as the specialist; (2) that we should strive to be the leaders in this new field and keep it under the proper control; (3) that nutritional conditions occur nearly as often in the country and rural communities as in our large cities. All of the case reports are rural cases in rural communities, over the past year and one-half; (4) the results of specific vitamin treatment of these conditions has been very satisfactory and the improvement has been very rapid and definite.

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### Migraine and Its Treatment With Ketogenic Diet

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The concept of Migraine to most physicians is synonymous with "sick headache" in which there is no demonstrable organic cause. The term is undoubtedly used at times to include other types of headaches although the clinical picture has been recognized as a distinct entity since the time of Hippocrates. The variations in type of headaches and other symptoms which occasionally accompany them make the delimitation of the disease rather vague.

The simplest type and by far the most frequent is hemicrania. It is characterized by severe and even excruciating headache, sometimes limited to a local area of the head and sometimes involving the whole of it. Occasionally there are conspicuous visual disturbances, the ophthalmic type, and even less frequently, transient paralysis of the eye muscles, the ophthalmoplegia type. Quite a number of cases have been reported in which there is an involvement of the central nervous system with transient paralysis. Some cases show abdominal symptoms which have given rise to the term "abdominal migraine."

The etiology is vague and many theories have been suggested to explain the reaction. The generally accepted view is that it is a disturbance in function in some part of the brain. No anatomical pathology has been demonstrated. There has been considerable evidence from time to time that eye strain was the cause and in some cases an allergic response seems to be the basis. A theory with quite a wide acceptance is that it is concerned with protein metabolism; it is assumed that there is too large a proportion of protein ingested as compared to the amount of carbohydrates. This theory is intimately associated with a disturbed liver function<sup>1</sup> which often is present even when protein sensitization cannot be demonstrated.

The number of theories as to the cause of migraine is small as compared to the number of types of treatment recommended for its relief. In our contact with these patients one is impressed with the great varieties of treatment measures they have attempted; all sorts of drugs for the relief of headache have been tried and undoubtedly individual patients have received benefit from some of these. On the theory of its etiology, the relief of eye strain has probably helped many and attention to diet has been of benefit to many. Some with determinable sensitization responses have been benefited. In recent years several reports have been made of the treatment of migraine by the use of peptone (Miller and Raulston<sup>2</sup>, Ball<sup>3</sup>) and approximately 50 per cent of these are helped and a small percentage entirely relieved. This treatment consists in giving intravenously 5 per cent peptone solution every three or four days beginning with 5 minims each dose until the maximum dose of 25 minims is obtained. Successive injections are kept at the maximum dose although if no benefit is derived after eight or ten injections it seems useless to continue. The fact is well known, however, that most migrainous individuals have become discouraged with all treatment and in each attack resort to their bed, an anodyne of some sort and even an opiate.

Epilepsy has been treated by ketosis diet for nearly ten years. It was ad-

vocated in 1910 by Guelpa and Marie<sup>4</sup> and the first published results in this country were made by Peterman<sup>5</sup> in 1924. Since that report a great many have appeared, the majority being quite favorably inclined in their opinion as regards the benefit of high-fat low-carbohydrate diet in epilepsy. The close relationship between epilepsy and migraine has for a long time been recognized and many apparent cases of conversion from the one condition to the other have been reported. An extensive statistical study<sup>6</sup> of heredity in migraine epilepsy syndrome shows there is a preponderance of evidence indicating some definite clinical relationship between migraine and epilepsy. The relationship existing between these two disease equivalents was suggestive to Schnabel<sup>7</sup> that what is therapeutically effective in one might be so in the other. He recognized that in the well-advanced acidosis of starvation a headache is likely to occur and also that acidosis is recorded in the textbook discussions as one of the possible causes of migraine. He was aware of the observations of Fawkes<sup>8</sup> and many others that vomiting in children is frequently associated with acetouria and that such children occasionally develop into a migrainous adult. On the other hand, he assumed that perhaps the acidosis was the terminal state of the migrainous headache and that the migraine attack might be initiated by alkalosis.

Schnabel reported a rather unsatisfactory series of twenty-three cases placed on a high-fat low-carbohydrate diet producing ketosis. Nine of these patients were either entirely or nearly relieved of headache attacks. Following his report, Barborka<sup>9</sup> has reported the result in treatment of fifty cases with ketogenic diet. Again the problem was difficult because the individual so frequently does not continue on the diet or cannot be checked up sufficiently to warrant very satisfactory conclusions. In his series, the attacks of fourteen were controlled, twenty-five were definitely improved and eleven were not benefited.

Our experience with this treatment has been much less extensive and yet the re-



sults from these observations and our own have been very encouraging in a type of difficulty which in so many instances goes entirely unrelieved in spite of all the therapeutic efforts.

#### ILLUSTRATIVE CASE REPORT

The patient, a woman, age 22, gave a family history of a maternal grandmother and a paternal aunt who had severe migraine attacks in early life. The immediate family history was negative.

She began having headaches at the age of ten of a severe type which her family thought she would outgrow. At eleven years of age she began to menstruate and after this they were a little less severe but continued at intervals of two to three a month through high school, usually forcing her to go to bed a day or two. Following an operative repair of a hernia at nineteen years of age, she was free from headaches for more than a year. But they recurred, and have continued until treatment was started in May, 1930.

The headaches are usually gradual in onset and always in the form of a right hemicrania. She has to go to bed, is extremely sick at her stomach, but has no visual troubles. They last usually from one to three days.

Careful examination revealed nothing physically unusual and five months after first seeing her, she was re-examined at the Mayo Clinic with entirely negative findings, including *x-ray* examination of the skull and various laboratory investigations.

She was placed on the initial ketosis diet of carbohydrate fat ratio of 1 to 1.5 and then gradually increased to a 1 to 6 ratio. At this point she developed a good ketosis and was maintained on this diet with nearly a complete absence of any migraine attacks. No other treatment was used and even after a mild liberalization of the diet was permitted, she continued free of headache.

#### CALCULATION OF KETOGENIC DIET

The practical and desired is the institution of a ketosis and its accentuation or reduction. Almost every report to date uses some slight variation in the method of calculating the diet. Certain

fundamental agreements are essential: the ratio of the fat to carbohydrate and protein begins about 1.5 to 1 and is increased as necessary to produce sufficient ketosis. An allowance of one gram of protein for each kilogram of body weight has been found sufficient to maintain nitrogen equilibrium and to allow a small quota for growth. The caloric requirements, for convenience, are roughly estimated. For adults a basal requirement at rest is safely covered by 30 calories per kilo of body weight.

With mild activity this is increased to 40-45 calories and for average activity to 50 or even 60 calories per kilo of body weight. For children the caloric requirement is proportionately more for younger ages.

The writer uses a simple formula based on the ratio of grams of fat to grams of carbohydrate. Protein is figured at one gram per kilogram of body weight. The initial diet is one with a fat-carbohydrate ration of 3 to 1. This is increased as necessary to 4 to 1, 5 to 1, and on even as high as 10 to 1, depending on the ketosis as determined by the urine tests for diacetic acid and acetone. A sample calculation is given:

Patient, an adult, weight 70 kilograms, slight activity (in bed) beginning with a carbohydrate-fat ratio of 1 to 3:

1. Total caloric requirement = 70 (kilo weight)  $\times$  30 (caloric requirement per kilo body weight for adult in bed) = 2100 calories.

2. Protein = 70 grams (1 gram for each kilogram body weight) which equals 280 calories to be derived from protein (4 calories per gram).

3. 2100 (total caloric requirement) — 280 (calories derived from protein) = 1820 calories to be derived from fat and carbohydrate in a ratio of 3 grams fat to 1 gram carbohydrate.

4. The proportion thus:

$$X : 1820 :: 4 : 31$$

X (Equals calories of carbohydrate required) : 1820 (calories of carbohydrate and fat together) : : 4 (calories from 1 gram carbohydrate) : 31 (calories from 1 gram carbohydrate and 3 grams fat.)

$$X = 235 \text{ calories}$$

5. Grams of carbohydrate =  $235 \div 4$

(calories per gram of carbohydrate)=58.7.

6. Grams of fat= 3 X carbohydrate (ration of 3 to 1)= $3 \times 58.7 = 176.1$  grams of fat.

7. Thus total caloric requirement equals 2100 made up of carbohydrate 58.7 grams, protein 70 grams, fat 176.1 grams.

As a rule it is necessary to increase the ratio between the fat and carbohydrate and on the following day after the institution of the above diet it is increased to 4 to 1. The ratio in step No. 4 then reads : 4 : 440 : : X : 1200. When it is increased to a 5 to 1 ratio, it will read : 4 : 49 : : X : 1200, etc.

#### PRACTICAL DIFFICULTIES

Certain difficulties are encountered in this treatment which are concerned with the instruction of the patient.

1. Failure on the part of the patient to rigidly adhere to the diet as prescribed. This is chiefly due to the fact that the patient does not appreciate the importance of small infringements.

2. Failure to eat all the diet. This is often a difficult problem but constitutes a large source of error and can only be corrected by a revision of the diet. A good many patients complain of hunger, perhaps due to lack of bulk, which can be helped somewhat by bran wafers, black coffee, beef tea.

3. Constipation is occasionally present and on account of its predisposition to attacks, should receive prompt attention, using salts, cascara or mineral oil.

4. The large amount of fat is often difficult to incorporate, particularly since it must chiefly be derived as pure fat (butter, cream, bacon, olive oil, and cod liver oil). The result is often nausea. Nausea is even more common at the inauguration of the diet and can be avoided by a gradual change to the high fat diet.

5. Failure or misinterpretation in the urine tests for diacetic acid and acetone.

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#### Spinal Fluid Cell Counts—A Staining Solution

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Although the cell count on spinal fluid is unquestionably one of the most important determinations on this fluid, the procedure too commonly presents a difficult and tedious task to inexperienced or infrequent observers. Inaccurate findings, unfair to the patient as well as the physician, are usually due either to delay in making the count or difficulty in recognizing the objects that come into the microscope fields. (Fig. 1). Misleading reports are, therefore, largely preventable.

The first source of error is well known but it may be worth repeating that sedimentation, clumping, pellicle formation, and clotting, seriously interfere with accuracy. Because of these things it would be best to make the cell count on any type of spinal fluid immediately after the withdrawal. Any clear fluid may contain several hundred cells per cu. mm.



Fig. 1. Spinal fluid cells, x520, stained with 5% acetic acid colored with Methylene Blue. Differentiation of types of cells and between cells and debris is very difficult.

and should be counted within an hour. Pellicle formation has been noted in



fluid from a patient with tuberculosis of the meninges, within an hour after it was obtained. Clear fluid from blocked canals occasionally clots promptly. Cloudy and yellow fluids from patent or blocked subarachnoid spaces are very likely to clot rapidly. Pellicles and clots tend to enmesh all of the cells present.

The second source of error may be excluded by the use of an efficient staining solution. To be of the greatest value this solution should enable one to make an accurate differential, as well as a total cell count, thus saving time and making an additional smear and stain optional. We have found that a staining fluid composed of two tenths (.2) of a gram of gentian violet in an ounce of glacial acetic acid when added to spinal fluid brings out the gross architecture of the cells so clearly that they are not easily overlooked. A differential as well

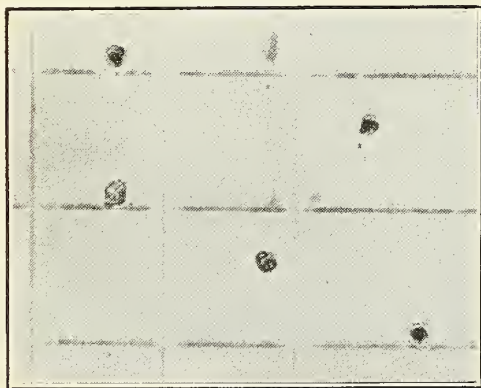


Fig. 11. Spinal fluid cells x520, stained with gentian-violet glacial acetic acid solution. Cell outlines are distinct and debris is not confusing.

as a total cell count therefore can be made with comparative ease and rapidity. The possibility of including red blood cells, debris, oil droplets, etc., in the count is almost entirely excluded. Microphotographs of cells (Fig. 2) so stained are quite satisfactory. The ingredients are readily obtained and we have found this solution to be more stable than the other known ones. Like all of the spinal fluid staining solutions debris may be present but if the container is kept corked when the fluid is not in use the accumulation of the detritus is relatively slow.

For practical purposes a special counting apparatus is unnecessary and the

generally owned white blood counting material is sufficient. The gentian violet-glacial acetic acid solution should be drawn to the five tenths (.5) mark and the spinal fluid then added to the 11 mark in a white blood pipette. While it is being shaken well for one minute the staining of the cells occurs.

The fluid from the white pipette bulb can then be placed on the ordinary blood counting chamber and the determination made immediately, using the high dry objective. The white pipette should be cleaned with water, alcohol and ether. We have never had errors due to previous blood counts when the pipettes have been routinely cleaned in this fashion.

The microscope fields are violet in color. The matrix has a medium intensity, the nuclei are almost purple, and cytoplasm has a light violet tint. If red blood cells are present their shadowy forms may be seen. Globulin in excess tends to be coagulated by the acid but this does not interfere with the cell distribution. The gross outlines of diplococci, streptococci, and staphylococci have been noted occasionally in fluids from patients with meningitis.

This staining fluid has been used in the Neurologic Department at the State University of Iowa since 1922 and in the Halstead Hospital since 1925 with very satisfactory results.

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### A Case of *Filaria Sanguinis Hominis*

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The case reported herein presents many very interesting and unusual features. Being a tropical disease and not common in its habitat, it would not be looked for nor suspected in this region, to say nothing of its positive demonstration. A species of mosquito, *Culex fatigans*, distinguished from the anopheles by their humped up position when resting, transmits the embryo of filaria to man by their bite, though drinking water containing the ova also causes the disease. A prominent and initial symptom is chyluria.

Tyson in his Practice of Medicine speaking of chylous urine and filaria, says "To produce chyluria, there must be brought about in some way a leakage of the chyle vessels into the urinary

passages between the kidneys and the neck of the bladder, in most cases probably by the blocking of the lymph channels, by the ova or embryos of the filaria bancrofti, though it may occur spontaneously, and the most searching blood tests will not show the filaria. Then too neither does every case of filaria show chyluria." Tyson and every other author consulted, stated that no means or remedy had been found to kill the filaria in chylous urine or stop the lymph leakage, which often persists for years.

Filaria were first discovered by Dr. Bancroft in Queensland. The usual habitat of the sexually mature worm is in the lymph vessels of various parts of the body, though they have been found in the left cardiac ventricle. The female produces enormous numbers of the larvae, which pass through the lymphatic streams into the blood vessels and thus are distributed over the body. The great difficulty of their demonstration in the blood is that they are found in the peripheral circulation only after sundown in the blood taken for that purpose, increasing there until midnight when they are the most numerous. From mid-day to evening none are found. Thus it would seem that during sleep peripheral vessels widen and allow the larvae to pass, which they could not do through the capillaries of the superficial skin otherwise and no doubt during this transmission the haematuria results.

Dr. Lewis, an English physician in Calcutta, India, first discovered filaria in the blood after finding them in the chylous urine and he emphasizes the extreme difficulty of their demonstration. How profound his study was and how true his deductions were are indicated by the conclusions he reached, which were afterward verified. He said "I have on hand 20 cases of the parasitic disease and believe it to be the cause of chyle urine, some forms of haematuria, one form of lymphatic abscess, a peculiar soft varix of the groin, a hydrocele containing fibrinous fluid, another containing chylous fluid and some forms of hydrocele and orchitis." It is a singular fact that the case I will now present is a perfect clinical picture as presented

above, having almost all of the symptoms mentioned by Dr. Lewis.

The patient is a man 67 years of age, ruddy, of vigorous physique, in fine health, except the necessity of voiding his urine once or twice each night, the urine always being clear and acid in reaction and containing no unusual cystic or renal debris. The onset of the disease was rather sudden, consisting mainly of difficulty of evacuating the bladder, the urine being ropy and tenacious, often passing in long glutinous strings, so a catheter and irrigations were resorted to. After a few days of this he reported that the previous night he suffered intense pain and almost complete stoppage of the bladder, which toward morning "broke loose," when he discharged a bloody plug, followed by dark red bloody urine. After five or six days the haematuria disappeared, except in an occult form, the urine then assuming a thick milky form, which he could not evacuate except through a catheter and irrigation. In a few days he complained of great tenderness in the left groin where a distinct tumefaction could be palpated. The left testicle became greatly enlarged, the scrotum and prepuce and adjacent skin became tender, red and enlarged from the general infiltration. At the same time the prostate gland became swollen to the diameter of a large tea cup, tender and cystic to pressure. A milky, gluey dripping occurred from the urethra on slight pressure. Apparently there existed here a general infection, but in the absence of sustained temperature this diagnosis was not tenable. He was always free from fever, except that at intervals of two to three days he would have a violent chill, lasting over an hour, then fever to  $103.5^{\circ}$  for three or four hours, followed by colliquative sweating, saturating his personal and bed clothing. On the intervening days he always felt "fine" until the bladder paroxysms came on again, having a good appetite. Bowel movements were encouraged with castor oil. A diagnosis of chyluria had been made and its origin persistently sought for.

During the entire period of this attack I made many microscopical examinations



of the bloody and chylous urine, finding no suspected filaria.\* However about August 12 I obtained some urine late in the evening, heavily dyed by methylene blue contained in some pyo-atoxin I had given him, and in this specimen I found the first filaria nicely stained, the embryo standing out clearly. These were seen by Dr. W. T. Tilly, surgeon, who had seen this patient previously in consultation, also by Dr. Geo. Davis, County Health Officer, and Dr. J. F. Barr. The latter had seen filaria in New York in cases of elephantiasis which is attributed to filariasis. It was then that I took a night's specimen of blood on cover glasses, which I was compelled to dilute greatly and here I found the first filaria in the blood. Later a blood specimen obtained by venipuncture through an auto-clave syringe, sent down by the Topeka laboratory, was sent in to the State Board of Health and a positive demonstration of filaria embryo was reported.

In view of the positive declaration of every writer that no known remedy had been found to destroy the filaria I concluded one guess was as good as another and I went back into my 58 years of experience to the days when this part of Kansas was a hot bed of malaria, bred in some very fine snipe and duck hunting territory. Many of these cases developed enormous enlargements of the liver and spleen, popularly called ague cake, becoming anemic, emaciated and often cases of nose bleed occurred. Quinine was of no avail, in fact often was injurious after heroic doses. In these desperate cases I usually gave arsenic in the form of Fowler's solution with fine results. Hence I reasoned if arsenic will destroy the plasmodium inoculated by one species of the mosquito, it might reasonably be assumed that it might also destroy the parasite of another species. Hence the patient was given Fowler's solution, 5 drops after eating, three times a day, beginning on August 16, following the positive findings and report of the State Laboratory. Whether it is a coincidence or a result the fact remains that all pelvic, scrotal, preputial and orchitic infiltration and tenderness have disappeared. No chills or fever or

sweating have occurred and the prostate has, while yet retaining its general bulk, become more elastic and finally the urine has cleared up, having the appearance of a mild form of pyuria, acid, and specific gravity of from 1010 to 1015. The arsenic is being continued and as a mild tonic and antiperiodic he is taking tincture red cinchona intercurrently. The prognosis, while it has been frank, has also been cautious and not over sanguine. No filaria have been found in the past 14 days but in the near future a new blood test will be made.

A year has now elapsed since the above report was made. The patient is in as good health as he was previous to the attack described. No filaria have been demonstrated since the report and chyle has disappeared from the urine. He has a mild cystitis and some prostatic irritation.

————— R —————

#### Letters from a Kansas Doctor to His Son

JOHN A. DILLON, M.D., Larned

My dear Boy:

I am glad that you will be home so soon for vacation for the old place is rather lonesome with you boys both away. You say you are anxious to get a good position for the summer and I infer you would like to be made cashier of the local bank. I fear you do not realize the situation in regard to labor at this time. There are no positions available and only occasionally a job. I have canvassed my friends pretty thoroughly and there does not seem to be any crying demand for college boys, for high school boys nor for boys of any kind.

However, I have secured you a job with a farmer friend who will pay \$35.00 per month. This will necessitate your getting around in the morning about the same time as usual only in this case you will be going out instead of coming in. Your first duty will be to arrange yourself alongside and partially beneath five cows of good parentage and proceed to milk them. I do not think you have ever had any experience along this line, but the technique is not difficult to acquire. You simply tug away at the cow until

there is no farther results, while she will swipe you across the face on an average of every ten seconds with her tail which is usually anything but tidy. However, I am trusting to your native tact to handle the cow question.

Your employer still clings to horses in his farming, but tells me he is going to get a tractor after this year. So if you make good this year it will be easier for you next season if you can get your old job back. I will do all I can to help you.

After breakfast and as soon as it is light enough to distinguish between cows and horses, you will be expected to select four or five of the latter, hitch them up and strike out for the field. By following the wire fences you will find the desired field. The same procedure may be observed in coming in on dark nights for supper. You will find the duties sufficiently strenuous as to make your track work unnecessary during the summer. But you will develop brawn and muscle that you never dreamed of and the country ham and fresh eggs will taste better than any a la carte at \$1.50 per plate. Of course, you will not be able to report in college regalia at the Elite Cafe every evening and the girls will have to look elsewhere for ice cream sodas and auto rides. This will materially cut down my overhead during vacation.

You will miss some of the conveniences of home and probably will do most of your toilet at the horse tank with a regular swim at the creek Sunday. There probably will be a good game of horse-shoes behind the barn Sunday afternoon, but on the whole it will be a quiet summer and you will be able to relax. Mother will drive out to see you occasionally and will feel very sorry for you as usual. However, I have often told her how hard I worked when I was your age and never came near breaking down. On the whole, I believe that the young man from college is fortunate to get an outside job during vacation.

Much love,

DAD.

## TUBERCULOSIS ABSTRACTS

Atelectasis is defined as imperfect expansion of the lung. The condition is usually considered to be due to a gross obstruction in, or compression of, one of the larger bronchi, which prevents the expansion of the distal alveoli and causes their collapse. Several recent articles point out that atelectasis is a frequent occurrence in pulmonary tuberculosis and that it accounts for many of the physical and *x*-ray signs usually attributed to the tuberculous lesions. An understanding of the mechanism of atelectasis in pulmonary tuberculosis helps to clear up many of the puzzling phenomena of physical signs which cannot logically be accounted for by the existing pathology.

### ATELECTASIS IN PULMONARY TUBERCULOSIS

Atelectasis in pulmonary tuberculosis may be caused in a number of ways. Tubercle bacilli commonly lodge in the terminal bronchioles where ciliated epithelium is not present and there tubercles are most likely to develop. The alveoli, or air cells, distal to the terminal bronchioles collapse and eventually become indurated. Large bronchi are also frequently invaded by the tuberculous process and produce atelectic areas distally. Extensive atelectasis is of common occurrence in chronic, fibroid tuberculosis, due to occlusion of bronchi by scar tissue or caseous material. Large tuberculous lymph nodes may, by pressure on the trachea or bronchi, cause patches or even extensive masses of atelectasis.

Apart from bronchial occlusion, there are other factors which favor atelectasis. In tuberculous lesions, particularly cavities, the air exchange is poor and the air pressure in cavities may be greater than the atmospheric pressure. Lobules supplied by bronchi intercepted by such cavities are likely to be collapsed. Atelectasis is probably favored also by the methods of treating tuberculosis; extended rest in bed, breathing with little effort, avoiding cough.

### *X*-RAY SIGNS OF ATELECTASIS

A characteristic anatomical finding in pulmonary tuberculosis is the small lung



with elevated diaphragm and displacement of the mediastinum to the affected side. The diminution in size of the lung and visceral displacement are not caused by contracting fibrous adhesions, for these changes are frequently observed early in the process before adhesions of any extent could form. Moreover, these findings also occur in types of tuberculosis that are not usually associated with fibrosis (miliary and pneumonic).

Bushnell finds displacement of the heart a very early sign and a delicate index of the existence of disease of the lungs. Norris finds a decrease in size of the entire hemithorax in unilateral, early tuberculosis. By fluoroscopic examination of cases with unilateral tuberculosis, the mediastinum is seen to move pendulum-wise toward the affected side during deep inspiration and back to the normal side during forced expiration. These and other observations indicate that the contracted lung of tuberculosis and visceral displacement are not always due to adhesions but are more often a manifestation of airlessness of the affected lung.

#### PHYSICAL SIGNS OF ATELECTASIS

Contraction of the affected side and restricted mobility are observed by mensuration and by inspection in early cases of tuberculosis. By percussion can be demonstrated signs of contraction of the entire lung; elevation and small excursions of the diaphragm. The earliest findings by auscultation are impairment or absence of the vesicular murmur and the gradual establishment of the bronchial murmur. Atelectasis accounts for or explains these changed breath sounds.

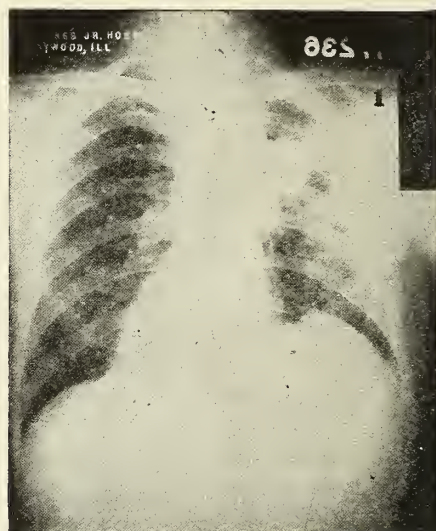
In more advanced lesions, physical signs become more pronounced; rales appear, and the mediastinal displacement comes into evidence. One of the most important signs in tuberculosis is the finding of rales during inspiration immediately following the expiratory cough. Such rales are due to the opening and closing of collapsed air passages as a result of forced breathing. As a tuberculosis process becomes arrested, the atelectic areas show the presence of an increased amount of fibrous tissue; the alveoli are then permanently col-

lapsed and rales can no longer be elicited.

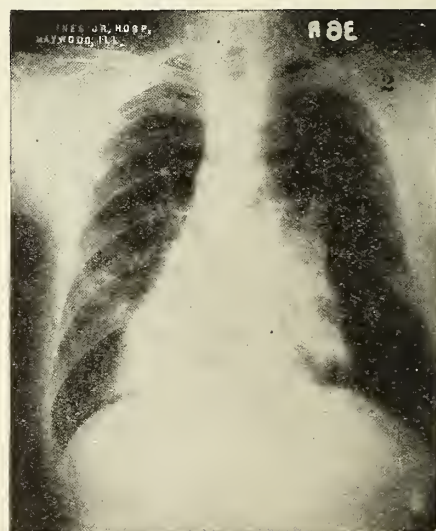
The characteristic physical signs mentioned seem to be due to atelectasis rather than to the specific tuberculous infiltration.

#### THE MECHANISM OF ATELECTASIS IN TUBERCULOSIS

In the newborn, the lungs completely fill the chest and the intrapleural pressure is equal\* to the atmospheric pressure. As development proceeds, the chest grows more rapidly than the heart



Tuberculosis of right lung. The right hemithorax and lung are contracted; the heart and trachea are displaced to the right and the diaphragm is elevated on this side.



Artificial pneumothorax induced without difficulty. The right hemithorax is normal in size. The viscera are in normal position.

and lungs, which causes the intrapleural pressure to become negative. Decrease of the lung volume in atelectasis or cicatrization further increases the negative pressure in the intrapleural space on the affected side. This causes a displacement of the mediastinum to the affected side. For the same reason, the diaphragm on the affected side is elevated by the abdominal pressure.

Atmospheric pressure on the outside of the chest causes the crowding of the ribs, the deviation of the sternum, and the curvature of the spinal column. These abnormalities are more pronounced during inspiration because the intrapleural pressure is further lowered during this phase of inspiration since the collapsed lung cannot inflate sufficiently to fill the created space. During forced expiration, the conditions are reversed and the increased intrathoracic pressure is spent not in deflating the lungs but rather in displacing the mediastinum, which explains its pendulum movement.

As the absorption of air from the tissues is a rapid process, the visceral displacement is an early sign in tuberculosis, pneumonia, and in other diseases in which atelectasis occurs.—*Atelectasis in Pulmonary Tuberculosis*, Ephraim Korol, *Amer. Rev. of Tuberc.*, May, 1931.

#### TREATMENT OF ATELECTASIS IN PULMONARY TUBERCULOSIS

Lobar atelectasis or massive collapse has become a well recognized clinical condition. It is due to bronchial obstruction, complications of chronic pulmonary disease, tumors causing pressure. Glenn believes that lobar atelectasis, when occurring in pulmonary tuberculosis, is usually caused by obstruction of the bronchus to the lower lobe by pressure from a tuberculous lymph node or by contracting scar tissue. In his cases, atelectasis has developed slowly. He admits that none of his cases were bronchoscoped or came to autopsy and that, therefore, exact information concerning the etiological factors is not available.

Textbooks and medical literature give

little information concerning the treatment of atelectasis as a complication of pulmonary tuberculosis. Aeration is sometimes restored without treatment. If the collapse has a sudden onset and the patient shows no tendency to hemorrhage, rolling the patient backward and forward with the involved side upward is sometimes effective.

The first patient with atelectasis treated by the author with artificial pneumothorax showed such marked improvement that the treatment was repeated in other cases thereafter. He reports seven cases of lobar atelectasis as a complication of pulmonary tuberculosis.

All seven cases were of the left lower lobe. Six cases were treated with artificial pneumothorax and all were benefited. In at least two cases, the prognosis was changed from unfavorable to favorable. One patient could not be given artificial pneumothorax because the pleural space was obliterated by adhesions. He concludes that atelectasis, when a complication of pulmonary tuberculosis, is not difficult to recognize if the likelihood of its being present is realized, and that artificial pneumothorax is the logical treatment for this condition.—*Massive Atelectasis in Pulmonary Tuberculosis and Its Treatment by Artificial Pneumothorax*, E. E. Glenn, *Amer. Rev. of Tuberc.*, May, 1931.

—R—

#### Chronic Syphilitic (?) Gastritis With Total Gastrectomy and Pernicious Anemia

Allan K. Poole and Lewis C. Foster, New Haven, Conn. (*J.A.M.A.*, June 27, 1931), report a case of chronic gastritis, probably syphilitic, in which the patient has lived five years after a total gastrectomy with the development of pernicious anemia about three years after the operation. The response to intravenous liver extract was immediate and quite striking. Desicated hog stomach was later used instead of liver and appeared quite adequate in maintaining the blood count and the patient's general well being.



# THE JOURNAL

of the

## Kansas Medical Society

**W. E. McVEY, M. D. - - - Editor**

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### THE HEALTH MAGAZINE

Every member of the Society should have received by this time a copy of the new magazine "Folks"—a sample copy in a good many instances in which a subscription blank was inserted.

The Bureau Board to whom was entrusted the publication of the magazine did not interpret the action of the House of Delegates as authorizing the publishers to send it to all of the members at the Society's expense at least no appropriation for the purpose was made.

Advance subscriptions amounting to nearly one thousand were received from members of the Society before the proposition was presented to the House of Delegates, and before the first issue was ready to mail this number had been increased to almost two thousand.

Not every member of the Society has subscribed. There are quite a good many who have not even subscribed for a copy to keep on the office table. On the other hand there are a good many who have sent in several subscriptions, some ten, twenty and in one case fifty. But by no means all of these advance subscriptions came from members of the

Society or from doctors, a considerable number of them came from nurses and a considerable number also from dentists.

While the members of the board realize that very few magazines can boast an advance paid subscription such as ours, we have reason to expect more active co-operation from the Society membership. Members of the Society could easily secure a large number of subscriptions from the people they know in the community. A magazine of this class at fifty cents a year does not require high powered salesmanship, it practically sells itself. But it is necessary to give the people a chance to look it over and this the members of the Society could do without any loss of dignity or self esteem.

Possibly we are too impatient and haven't waited quite long enough, but the first number having been printed and mailed and the second number being now in the printer's hands it perhaps seems longer than it really is. We have been asking the secretaries of County Societies to send in names of people they can recommend for solicitors. We have been hearing pretty constantly how many people have no employment and some of these certainly will be willing to earn a few dollars in such a pleasant employment as selling something the people have been wanting for so long. According to the list in the society calendar, there are 61 secretaries of county societies, but that list must be very inaccurate for, according to the replies received to our letters, there are only four. Perhaps we are again too impatient and have not given them time to select the most desirable ones from the large number available.

There is one thing certain and that is, if we cannot get the secretaries to find

solicitors for us we will get them in some other way. We have now several in the field and will put more out as soon as we can locate them.

We trust that no member of the Society will feel humiliated when he is solicited for a subscription to the magazine published by his State Society. That will certainly happen to those whose subscriptions have not been received at the office of publication. Solicitors will all be given the names of those who are already subscribers, and they will be expected to see all the others.

A good many congratulatory letters have been received, some from members of the Society but a good many others from laymen. So far only one letter of criticism has been received. The letters received from laymen would convince anyone that the people will appreciate what the medical profession is trying to do for them.

Getting this magazine started has occasioned a great deal of extra work for the Bureau, and there is still a great deal to be done. The extreme gratification experienced on seeing the last of the first issue in the mails was considerably modified by the realization that work must be immediately started on the next issue. So far the members of the Society have been very generous in assisting us in getting material and this is and will continue to be the most difficult part of the work. During the next ten months a large number of short articles will be required and they should be furnished by members of our own organization. There is no excuse for waiting to be asked to contribute something, every member should be willing to tell the people something they ought to know.

#### TOO HIGH FOR THE CALVES

A minister, possibly a little above the

average in scholarship, came to preach at a small community church. One of the congregation was an old farmer who, on commenting on the service, said: "He gits the fodder a leetle too high for the calves."

That comment could be very appropriately made on some of the ultrascientific articles that occasionally appear in some of the high class medical magazines. Reports of certain lines of research that might be of great interest to the ordinary members of the medical profession and possibly of much importance in the progress of scientific medicine, are so obscured with technical phraseology and statistical mathematics that they are meaningless to nine-tenths of those who read these magazines. Few have the patience if they have the understanding, to read with any degree of comprehension more than two or three paragraphs of some of these attempts at scholastic display.

Even if the nut should have some meat in it, the difficulty of cracking it makes one doubt if he has been compensated for his trouble, but one is likely to lose his equipoise when he has expended a lot of time and patience in reading through one of these articles only to find that it contains just a few well known facts that have been rearranged on some mathematical scale, which the author tells us finally indicates that  $a$  times the square root of  $d$  divided by the square root of  $c$  minus  $b$  equals plus or minus  $x$  divided or multiplied by the square root of minus  $y$ .

It is also somewhat disappointing when one has read fifteen or twenty pages of a report of some recent laboratory investigation of the effects of certain diets, to be confronted with a summary stating that in a series of one hundred dogs fed on mouse livers for pe-



riods of ten, fifty, one hundred and three hundred days it was found that there was no more torque in the hair of these dogs at the end of these various periods than in that of an equal numbers of controls, and the final conclusion that mouse livers in the diet of dogs does not measurably increase the torque in the hair of the dog.

Some of us in the ranks, and the ranks include a rather large majority, are inclined to wonder just what purpose such articles serve, just what they add to the general knowledge of medicine, and if it is the author or the stuff he writes that gains such eminent recognition.

It is not intended to belittle the scientific value of all such systematized investigations, for that has been quite thoroughly demonstrated. The reports of many of them are interesting to follow and their results of considerable importance even though they may only confirm what has already been accepted as fact, or the results be entirely negative in establishing new facts. But there are some of them in which the apparent objective has no significant relationship to what is known or what is desirable to know.

But perhaps there are good reasons for publishing even these reports, even though the results of the work are negative and even though the apparent objectives fail to impress one as having any particular significance in the progress of medicine. Priority means considerable to these men who are devoting their time to these investigations and getting little or no support or encouragement and priority is given to the man whose reports are first published rather than to the one whose work is first completed. Possibly priority for negative findings ranks in favor with priority for actual discoveries. It must be admitted that in many cases it is the nega-

tive findings that first discredit some of our long accepted theories, and no doubt one should not scrutinize too closely the apparent objectives of these researches.

At any rate a summary and conclusions are usually appended so that one may know something of what the article contains before reading it. If the summary promises something of interest he may then read as much or as little as his interest and patience will permit.

#### THE DEPRESSION FROM A DOCTOR'S POINT OF VIEW

##### *An Allegory*

A great many remedies have been suggested for the prevalent epidemic of financial depression. Occupational therapy is of course the specific but the supply of occupations is so far depleted that its general use is at present out of the question.

Moratorium seems to have been for some time the remedy of choice by the people generally and now, since the Hoover Clinic has recommended it, seems to be more popular than ever. Inasmuch as this remedy only relieves the immediate distress and postpones recovery and greatly increases the incidence of the malady, further research seems indicated.

But in order that an intensive study of the therapeutic efficiency of the many suggested remedies may be made the source as well as the cause of the epidemic should be determined. On this point the data so far available seem to be confusing if not conflicting, but indicate rather definitely that both the source and the cause lie somewhere in the province of our state and national governments.

One of the diagnostic specialists who has analyzed the data available has advanced the opinion that the cause of the epidemic is an outgrowth of certain

pathologic conditions in our government personnel. He deduces from his studies that a majority of the individual participants in our governments' bounty have been so long and so continuously intoxicated with prohibition that they have developed a mental squint, with a very limited field of vision and an intense phobia for what the opponents of prohibition call "personal liberty." In fact this phobia has become so intense that the resources of government have been taxed to the utmost to control the manufacture and sale of "personal liberty." Citizens have also been taxed, in many cases they have been taxed more than they could pay and have been compelled to take up bootlegging in order to make enough money to pay their taxes. So many found this their only recourse that the competition became very keen and the profits dwindled until very few of the most highly respected citizen found it sufficiently profitable to engage in it. This somewhat vague theory might explain the occurrence of the epidemic except for the fact that it is also quite prevalent in Kansas which fact alone negatives an otherwise plausible conclusion.

Another diagnostic specialist concludes from his study of the data at hand that although the primary infection is still unidentified one of the provocative factors in the spread of the epidemic was wheat sensitization. This he explains in some detail. It seems that among the government's pet individual obstacles to progress are many whose vocation is politics but whose avocation is farming, at certain times and places at least. These together with numerous sympathetic friends of the farmers constitute a working majority of those whose duty it is to guard the government's treasury, that is to provide ways and means to prevent the accumulation

of a surplus. This investigator claims to have found further that the dirt farmers had been so occupied in building political fences for the avocational farmers the government serves, and in helping to distribute the rapidly accumulating highway funds, with the least noticeable effects, that they had no time to raise anything but wheat, with the result that they all became sensitized from a complete wheat saturation. This saturation was alarming, especially to the avocational farmers mentioned above. A consultation was held and various methods of treatment were discussed. They agreed that the methods followed by the medical profession in similar conditions offered the best prospects for relief, but they misinterpreted the theory of vaccine therapy and decided that the remedy for wheat saturation was more wheat. They therefore appropriated some hundreds of millions to stabilize the wheat market and thus insure its continued production. They probably felt that in this way they could kill two birds with one stone; they could, in line with their duty, prevent any possible accumulation of a surplus in the treasury and at the same time assure the continued fence construction by the dirt farmers. There was some apparent relief but this was only temporary for within a short time the saturation had been converted into a supersaturation and the sensitization intensified and more widely disseminated.

Another, an independent investigator, after reviewing the opinions stated above, made a thorough analysis of the data available. He reports the finding of some further facts that seem to him to have considerable bearing on the problem in hand. He finds that among all of the government dependents, even among the prohibition addicts and the avocational farmers, although there are



some skilled artisans there are no laboring men. Laboring men as a factor in the incidence and spread of this epidemic and particularly upon the development of the wheat saturation were entirely overlooked, an almost fatal oversight. It is a well known fact that laboring men have a very large potential absorbing capacity for wheat, which under normal conditions would prevent such a wheat saturation as the farmers are now suffering from. This investigator after examining several thousand laboring men, found, in practically all of them, an entirely empty receptaculum pecuniae the contents of which it is well known controls the wheat absorbing power of each individual. This investigator concludes that there was serious and irremediable error in overlooking the anemic condition of the laboring men; that instead of encouraging the wheat sensitized farmers to produce more wheat, thus causing a supersaturation, some method should have been found to relieve the depleted condition of the laboring man's receptaculum pecuniae and thus increase his wheat absorbing capacity.

This interpretation of the historical data in connection with the clinical and laboratory findings confirms the first opinion offered, that is that a specific remedy for the epidemic will be found in occupational therapy. However the aforesaid guardians of the treasury lacking the necessary physical equipment to administer this treatment, considered the good results reported from the use of psychoanalysis, but lacking the necessary mental equipment for that procedure, they have according to last reports resorted to christian science and coneism.

#### NEW CLASSIFICATION OF GOITERS

The American Association for the Study of Goiter has offered a standard

classification and an improved nomenclature in goiter.

The proposed classification is as follows:

- Type 1—Non-toxic Diffuse Goiter
- Type 2—Toxic Diffuse Goiter
- Type 3—Non-toxic Nodular Goiter
- Type 4—Toxic Nodular Goiter

In regard to the nomenclature the Secretary says:

Our association advocates a policy of using the simplest and yet the most descriptive terminology possible.

The use of proper names, while it is impossible to dispense with many well established ones in goiter literature, be discouraged; as should coined words invented to popularize a fad or fancy.

Emphasis should be made upon the importance of not confounding varieties and sequelae with types. The use of such terms as exophthalmic, hemorrhagic, cystic, adolescent, colloid, intra-thoracic, substernal and congenital are perfectly proper when used to describe varieties, but only constant characteristics should be used to designate types.

—————R—————

#### CHIPS

Bessie E. Cook an anesthetist, in an article appearing in the *London Lancet*, April 18, reports her studies on post-operative vomiting and compares the frequency of its occurrence in various types of operations and with various anesthetics and in confirmation of some of her theories compares the incidence and duration of post-operative vomiting as recorded in the practice of different surgeons. This reveals a very marked difference which she attributes to a difference in the gentleness with which the operator does his work. Her plea is for gentler technique in surgery. With gentle touch he does not require such deep anesthesia. She says: "The use of gas means that the patients' respiratory and circulatory systems do not suffer so great an upset, and their organs receiving less trauma from the velvet touch of the gas-accustomed surgeon, recover sooner from the necessary minimum of handling."

It must be kept in mind that liver therapy does not cure pernicious anemia and that patients with this disease must continue the treatment indefinitely. Carey reports (*Archives of Internal Medicine* for June) three cases that died while taking adequate amounts of liver and liver extract. He uses these cases to emphasize the fact that hemolysis is only one of the essential factors in pernicious anemia; that achylia is always present from the beginning and perhaps precedes the other changes; that the spinal cord changes are to be found in many of the cases; and that liver therapy does not diminish or control either of these. He calls attention to the fact that death may result from progression of the disease of the spinal cord in spite of the relatively good condition of the blood. But in other cases the blood forming organs become incapable of further regenerative effort, perhaps on account of age or possibly from exhaustion from overstimulation.

That diets low in starch content are of use in arthritis seems to be suggested by the findings of Monroe and Hall, reported in the May number of the *Archives of Internal Medicine*. The stools of forty patients with chronic arthritis were examined and the results compared with those obtained from the stools from seventy-one patients suffering from other diseases. Seventy-nine per cent of one hundred and forty-two stools from the first group showed an excess of starch as compared with 26.8 per cent of ninety-seven stools from the control group. Iodine staining organisms were found in 90 per cent of the arthritic patients and in 22 per cent of the controls. The fermentation test was positive in 82.5 per cent of the arthritics as compared to 24 per cent for the controls. He concludes that difficulty in the utilization of starch is prone to occur in patients with chronic arthritis, but he does not explain how a starch free diet would effect the disease.

A coroner's jury after weighing the evidence in the etiology of essential hypertension would probably bring in a

verdict that "essential hypertension is caused by some condition or conditions or some thing or things at present unknown." However, as soon as one suspect is acquitted for want of convincing evidence, others are submitted for preliminary trial, so that there is reason to hope that ultimately the guilt will be fixed where it belongs. In the May number of *Archives of Internal Medicine*, Raab reports in considerable detail his experiments to determine the causes of increased central vasomotor irritability. He concludes that the symptoms of essential hypertension can be considered due to the local need of oxygen and the accumulation of lactic acid within the vasomotor centers of the brain stem as a consequence of local circulatory disturbances.

Deficiency of iodine in food does not cause goiter according to the results of a series of experiments conducted by Helwig at Wichita and reported in the *Archives of Pathology* in May, 1931. Wichita is in a territory supposed to be free from endemic goiter and for that reason particularly appropriate for these tests. Rats fed on a strictly iodine free diet did not show any enlargement of the thyroid but rather there was evidences of atrophy. Rats fed on food with high calcium and low iodine content showed marked thyroid hyperplasia. Rats fed on a diet rich in both calcium and iodine produced small colloid goiters. He concludes that the essential cause of goiter is a positive agent and a high content of calcium in the drinking water is one of the positive factors. He confirms the finding of Tanabe that an excess of iodine in the drinking water exerts an inhibitory action on hyperplasia of the thyroid gland in spite of a high calcium content. He also confirms Wegelin in the theory that lack of iodine causes atrophy since iodine is a strong stimulant to the action of the thyroid gland. These findings seem to further cloud a picture which was already none too clear. If calcium as the positive agent causes hyperplasia and iodine is a stimulant to the action of the thyroid, the fact that this effect of a high calcium



diet is controlled by a high iodine diet, or increased by a low iodine diet, needs further explaining, especially since the theory of compensatory hypertrophy is denied.

Asymmetry of the head and face in infants is always a matter of serious importance to parents. It is not frequently due to rickets according to Greene, in the *American Journal of Diseases of Children*, June, 1931. He says that in the cases he studied he collected data concerning the growth and development, the nature of feeding, the blood picture, the chemical analysis of the blood and roentgenologic appearance of the bones. The infants were well nourished, the diet was adequate and well balanced, the blood was normal, the concentration of phosphorus and calcium was within normal levels, and roentgenologic or other signs of rickets were absent, and almost all the children had received antirachitic therapy from early infancy. He attributes the deformity to an osteoporosis as the underlying cause and mechanical pressure as the exciting cause. Asymmetry in the occipital region is common in infants and is due to the osteoporotic bones and the pressure resulting from the posture of the infant. They may be corrected during the early months of life by changing the posture so that the pressure falls on the opposite side of the head. Corrective measures are important for otherwise the deformity may persist into adult life.

Topper, in a paper on thyroid therapy published in the June number of the *American Journal of Diseases of Children*, reports the results of some clinical investigations and concludes: "Since thyroid extract does not seem to affect the basal metabolism of children with a normal basal metabolic rate, the stimulative effect, on their growth and development leads me to believe that the basal metabolism should not be the only criterion of thyroid therapy. The difference in the action of thyroid extract on growing children and on adults makes one believe that thyroid increases the phase of metabolism that is dominant in

the individual person—anabolic processes of growth and development processes in the child and catabolic or oxidative processes in the adult, whose growth and development processes are complete. This stimulative effect on the growth processes in childhood is best seen at the time of puberty, when the impulse to grow is at its height."

The studies were made on sixteen children with some retardation in mental or physical development. Thyroid function was not disturbed. In those with subnormal metabolic rate there was an increase in those with a normal rate there was no increase. All of them showed an increase in height well over the expected increase for the age. There was also noted development in dentition and in bone.

There are several conditions in the teeth that may cause reflex facial pain according to Cahn in the *Journal of Dental Research* for August. Changes in the pulp are common and among these perhaps the most frequent cause of reflex pain is a calcification of the pulp in which nerve fibers are impinged upon or engulfed. This condition is frequently found in teeth that have not been decayed. The nerves of the pulp may also be involved in inflammatory processes. He does not consider totally embedded teeth as important causes of pain by pressure upon nerves, but when they do cause pain it is because of the calcification that has occurred in the pulp. The pressure of an erupting tooth against an adjacent tooth is sometimes the cause of facial pain. Infection and traumatism of the alveolar process is also mentioned as a cause. The extraction of a tooth may traumatize the nerve of the alveolar process to such an extent that chronic reflex neuralgia results. Obscure facial pain is frequently the result of the infection of the process nerves in pyorrhetic conditions. Chronic pain in the tongue is frequently due to traumatic injury of the lingual nerve and it may also result from a traumatism of this nerve during an anesthetic procedure.

Forbes reports the results of his studies of dental caries from a biochem-

ical standpoint in the *Journal of Dental Research* for August. He stresses the importance of the alkali reserve in the prevention of caries. A condition of acidosis favors decalcification of the bony structures and teeth from within and favors the destruction of the teeth from without by the production of an acid saliva, with a low neutralizing action on acids. A potentially alkaline diet by keeping the alkaline reserve toward a high normal promotes calcification and prevents decay. He quotes Bunting as claiming that diets high in vegetables and milk practically eliminate caries in children. He suggests that a diet of this kind would be potentially alkaline.

— R —  
**DEATHS**

William David Gurden, Topeka, aged 37, died, May 30 of tuberculous peritonitis. He graduated from Meharry Medical College, Nashville, Tenn., in 1927. He was a member of the Society.

William Cochran Hall, Coffeyville, aged 70, died July 4 of pneumonia. He graduated from the College of Physicians and Surgeons, Baltimore, in 1885. He was a member of the Society.

Joseph E. Rowan, Wichita, aged 42, died July 20, at Cleveland, Ohio, of bilateral polycystic kidneys. He graduated from the Chicago College of Medicine and Surgery in 1914. He had been professor of surgery and surgical anatomy in the Illinois Post-Graduate Medical School; Major in Regular Army Medical Corps in 1917; Reg. Surg. 149th Field Artillery in France. He was a member of the Society.

— R —  
**Kansas Medical Auxiliary**

My greetings not only to the members of the Kansas Medical Auxiliary but to all physicians wives of the State.

Heretofore, the Auxiliary work in Kansas has had many drawbacks. I hope to overcome some of these obstacles at least, but shall need much assistance.

The national meeting at Philadelphia in June was a great stimulus to action. May I not pass on to you some of this

achieved inspiration. There should be many more auxiliaries organized this year. If there is none in your county or if you are not affiliated with some other county, you will hear from me. I shall depend on you for co-operation.

Most sincerely yours for a healthier Kansas,

MRS. CHARLES B. VAN HORN,  
President Kansas Medical Auxiliary.

REPORT OF THE PHILADELPHIA CONVENTION  
OF THE WOMAN'S AUXILIARY TO THE  
AMERICAN MEDICAL ASSOCIATION.

June 8-12, 1931.

Though relatively few could attend, yet all our Auxiliary women everywhere are interested in our recent convention, the ninth annual meeting of the Woman's Auxiliary of the American Medical Association in Philadelphia. Because of this interest your national chairman of Press and Publicity feels that she must give you at least a few items concerning that meeting.

The convention attendance was the largest ever. More than fourteen hundred delegates, members, and guests were present. The program was happily varied with business and recreation.

Activities began Monday, June 8, with a luncheon in honor of the National President, followed by three round-table conferences. These were on (1) Programs for County Auxiliary Meetings, (2) The Technique and Value of a Committee on Public Relations, (3) History and Archives. These formed a practical, helpful series of discussions.

The convention proper was officially opened by the President, Mrs. J. Newton Hunsberger at 9 a. m., Tuesday, June 9. Besides much other business, all standing committees reported at this meeting. These were: Organization, Program, Finance, Legislation, Public Relations, Hygeia, Revisions, Press and Publicity, Printing. It is of interest to know we have over 12,000 paid-up members. Income the past year was \$5,338.13 and expenses to April 1 were \$3,087.69.

The program of the Wednesday session embraced, as its outstanding features, the report of State Presidents,



and the election and introduction of new officers.

The post-convention board meeting was held Thursday morning, and was presided over by the newly installed President, Mrs. A. B. McGlothlan, who outlined her policies for the coming year and announced her committee appointments. Two features of this meeting gave interesting and helpful results. These were the responses to the topic "What have I gotten out of this Convention?" and the discussions incident to opening "A question and suggestion box."

Not only Pennsylvania, but New Jersey and Delaware assisted in the entertainment provided for this convention. Trips to historic and other points of interest, teas, luncheons and receptions, showed the hospitality and resourcefulness of the splendid Convention Committee.

Next year the convention will be in New Orleans, in April. Plan now to attend that meeting.

The following paragraphs carry a brief message to you from our President, Mrs. A. B. McGlothlan.

#### THE PRESIDENT'S MESSAGE

The reports of the chairmen of the various national committees and of the state presidents indicate unmistakably to the Auxiliary women everywhere that as doctors' wives we have a definite sphere of influence as members of lay women's organizations. As such we may form a strong bond between the medical profession and the lay public.

Because of this possibility we shall make every effort this year to strengthen our organization both in numbers and in quality of work done.

The greatest demand made upon us is for the right kind of source material for health programs, and for health program speakers.

We are attempting to supply this information through a selected packet of literature, assembled by the Bureau of Public Information of the American Medical Association; by leaflets on communicable diseases compiled from the

best recent medical literature and approved by a member of our advisory committee appointed for that purpose; by the dissemination of leaflets on "Some Contributions of Modern Medicine to the World"; by announcement of the American Medical Association radio broadcasts; and by using our best energies to promote the circulation of Hygeia.

We ask that every doctor's wife read the recommendations concerning Hygeia made to the Woman's Auxiliary by the House of Delegates of the American Medical Association. It is found on page 2116 of the June 20 issue of the Journal of the American Medical Association. Please see that your state and county medical societies also take notice of this recommendation of the House of Delegates.

Many Auxiliaries are doing outstanding constructive philanthropic work such as contributing to a medical benevolence fund, assisting in hospital auxiliary work and establishing medical student loan funds.

We believe that one of the best services we can render to the medical profession is to make our state and national conventions so attractive that great numbers of our women will be enticed to attend and will influence their husbands to come.

The recent meeting in Philadelphia showed that a convention can serve such a purpose. To this end we are already planning to make the convention in New Orleans the best yet if possible and we herewith invite all the doctors' wives to come and bring their husbands.

I hope your Press and Publicity Chairman will let me talk with you again. Always read her reports and those in the Bulletin of the American Medical Association. In the Bulletin are two pages edited this year, as last, by Mrs. Walter Jackson Freeman, our national President-elect. I commend those pages and these to you and ask your support to make our departments co-operative, useful and successful.

**Extract From the Report of the Committee On Medicolegal Problems, American Medical Association, June, 1931**

To the Board of Trustees:

Your Committee on Medicolegal Problems respectfully submits the following report:

**CRIMINOLOGIC INSTITUTES**

The detection and punishment of crime is a major problem today throughout the entire country. Experience abroad and a limited experience in the United States have shown that science can do much to aid in accomplishing those ends. Frequently the first step in the detection of crime, the identification of the living and the dead—sometimes the identification of mutilated portions of dismembered bodies—depends on anthropometric measurements, fingerprints, evidences of age, sex, race, pre-existing diseases, and old injuries, such evidence as is discoverable only by skilled pathologists. Examinations of the dead body, by inspection and autopsy, to determine the cause and time of death, call for like services. The nature and origin of stains must be accurately determined, procedures that call for scientific technique and accuracy. Vomitus, excreta, and the contents of the intestinal tract, the various tissues and organs of the body, and various substances found in and about the place of death must be analyzed to determine the presence or absence of poisons, the nature of food and drink ingested by the deceased or the accused, and so on. Inquiries must be made into the mental states of persons from whom complaints are received and of persons under arrest or on trial, whether those mental states be due to narcotic drugs, alcohol, injuries, disease, congenital defects, or insanity. Scientific investigations are necessary in connection with charges of criminal abortion, rape, and infanticide. On the borderline of medicine, studies must be made to determine what relations there are, if any, between a given projectile, powder stain, powder residue, cartridge case, and weapon, and a given wound. Somewhat farther afield are studies of disputed documents, of foot-

prints, the tracks left by vehicles, impressions of jimmies, and marks left by the use of oxy-acetylene torches and explosives in connection with safe-cracking.

The character and extent of the equipment necessary for the several purposes named in the preceding paragraph, and the character and extent of the knowledge and skill necessary for the practical utilization of that equipment in the everyday detection of crime and the punishment of criminals, are such as now preclude their utilization by the average community. Only the States themselves and in a few instances the larger cities within the States are able to finance such activities. Moreover, in communities of average size or below, occasions for the utilization of many of the devices necessary for the purposes named and for the services of persons skilled in the use of those devices are so infrequent as to make the cost of operation unduly great, when compared with the units of work done.

The only logical procedure seems to be for each of the several States to provide and maintain the equipment and staff necessary for the service of all communities within its borders. The establishment of such agencies by the several States would in no way interfere with the establishment of similar agencies by such municipalities as need and can afford them. On the other hand, equipment and staff maintained by the State would be at the command of all counties, municipalities, towns, and villages within its jurisdiction, as they might need them from time to time. The cost of such activities might well be borne by the State. If, however, the State should deem it advisable to impose a part of that cost on counties, municipalities, towns, and villages, a definite schedule of charges might well be established.

Such a State organization as has been outlined above would serve not only to aid directly in the detection and punishment of crime but also to serve indirectly toward that end by contributing toward the proper instruction of the peace officers and agents of the State,



and of every county, municipality, town, and village, in methods for the investigation of crimes and suspected crimes. Such officers and agents could be taught how best to collect and preserve such evidence as the circumstances afford and how to avoid destroying or marring essential evidence. State agencies of the type named might well have connected with them experts qualified to keep accurate records of crime and crime prevention, so as to measure the success or failure of activities for those ends.

Organizations such as have been described have been variously dubbed medicolegal institutes, criminologic institutes, and scientific crime detection laboratories. The name seems hardly material, although the name last stated is hardly broad enough to cover the true functions of such organizations.

It seems to your committee that action to promote the establishment of such organizations in each of the several States would be in the interest of good government. Your committee recommends, therefore, that it be authorized to take action toward that end, working in conjunction with and through the Bureau of Legal Medicine and Legislation.

H. DOUGLAS SINGER,  
WINFRED OVERHOLSER,  
WILLIAM C. WOODWARD,  
LUDVIG HEKTOEN,  
WILLIAM J. STAPLETON, JR.

Approved by the Board of Trustees,  
June 7, 1931.

### BOOKS

Medical Jurisprudence by Carl Scheffel, PhB., M.D., LL.B. Published by P. Blackiston's Son & Company, Philadelphia.

The author has taken a different viewpoint from most works on this subject and endeavors to point out to the physician how legal factors affect him in his every day practice. He has sought to make available to the average physician, information of inestimable practical value to him in easy reference book form.

The Doctor and his Investments by Merryle Stanley Rukeyser, financial editor medical economics and dental survey, etc. Published by P. Blackiston's Son & Company, Philadelphia. Price \$2.50.

The author observing that doctors are amateurs in the field of economics, the prey of fraudulent vendors of blue sky issues and of high pressure salesmen of legitimate issues, he offers his advice and council in their financial affairs.

It contains a lot of sound advice, advice which is particularly adapted to the needs of physicians. His suggestions are along safe and conservative lines and therefore more dependable.

Hypertension and Nephritis by Arthur M. Fishberg, M.D., associate physician to Beth Israel Hospital, etc. Second edition revised. Published by Lea & Febiger, Philadelphia. Price \$6.50.

The author has made quite a thorough revision of the text, has rewritten numerous chapters and has added some fifty additional pages. He has endeavored to make the work of greatest value to the family physician who is usually in charge of cases of the type described. Particular attention is given to symptomatology. He says that the uncomplicated specific gravity test is the best method at present available for studying the functional capacity of the kidneys. This book will prove its value to anyone who will read it.

Chemistry for Nurses by Harry C. Biddle, A.M., Instructor in Chemistry, School of Nursing, Western Reserve University, etc. Published by F. A. Davis Company, Philadelphia. Price \$2.75.

The author says this book presents the essential facts of chemistry which may be covered in a forty-five hour course. Many books attempting to present chemistry for nurses are either too involved, too difficult, too long or too elementary to be of any service to the student. He attempts to present only such facts and principles as have bearing on the work the student must face.

Health on the Farm and in the Village by C. E. A. Winslow, Dr. P.H., Prof. of Public Health Yale School of Medicine. Published by The Macmillan Company, New York. Price \$1.00.

This is a report of a survey of seven years experience of the Cattaraugus County Health Demonstration. The report goes into considerable detail concerning the organization, the facilities and the benefits derived by the people.

Diabetes, its treatment by insulin and diet, by Orlando H. Petty, M.D., Prof. of Diseases of Metabolism, Graduate School of Medicine, University of

Pennsylvania, etc. Fifth Edition. Published by F. A. Davis Company, Philadelphia. Price \$2.00.

This little text was written for the instruction of diabetic patients. In this edition the section on vitamins has been rewritten and there have been added twenty-one pages of sample diets for the use of those following the orthodox dietary rules of the Jewish faith. Some necessary corrections and changes have been made in food values.

Eye, Ear, Nose and Throat for Nurses by Jay G. Roberts, M.D., Pomona, California. Published by F. A. Davis Company, Philadelphia. Price \$2.25.

This seems to be fairly well adapted for the instruction of nurses, at least it covers as much about the recognition and care of the diseases of these special organs as a nurse needs to know. And the author seems to have selected the material for his text with the nurses requirements in mind.

Textbook of Histology by Eugene C. Piette, M.D., Pathologist and Director of the Laboratory of the West Suburban Hospital, Oak Park, Illinois, etc. Published by F. A. Davis Company, Philadelphia. Price \$4.50.

This is a complete work on histology in which the author has considered the convenience and needs of the student and has made conciseness an object. The arrangement is convenient and the text is clear.

Food Allergy, its manifestations, diagnosis and treatment by Albert H. Rowe, M.D., lecturer on medicine in the University of California Medical School, etc. Published by Lea & Febiger, Philadelphia. Price \$5.00.

Food allergy seems to be growing in importance with the profession. The author of this book is particularly impressed with its relation to asthma and migraine, but suggests its probable causal relation to gastro intestinal symptoms. He says "All physicians can obtain results in the treatment of food allergy who are willing to devote time and thought to the mastery of the methods of diagnosis and therapy described in this book."

The Treatment of Injury by the General Practitioner by Clay Ray Murray, M.D., Asst. Prof. Surgery, College of Physicians and Surgeons, Columbia University. Two volumes. Published by Harper & Brothers, New York. Price—2 vols., \$5.00.

This is one of the Harper Monograph series. In the two volumes the author

has covered considerable ground and has put before the reader simple explanations of the methods of treatment for injuries that have proved most successful. The treatment of fractures and dislocations has been given particular attention. The text is profusely illustrated not with photographic reproductions but with black line drawings which seem to answer the purpose remarkably well.

Proctoscopic Examination and the Treatment of Hemorrhoids and Anal Pruritus: By Louis A. Buie, B.A., M.D., F.A.C.S., Section on Proctology, The Mayo Clinic, Rochester, Minnesota, and Associate Professor of Surgery, The Mayo Foundation, University of Minnesota, Minneapolis, Minnesota. Octavo of 178 pages with 72 illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth \$3.50 net.

The author states the purpose of this book as being to present the technic of direct examination of the anus, rectum and sigmoid; to outline the treatment of hemorrhoids and to offer new information on the subject of anal pruritus. The text is elaborately illustrated.

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1930. Volume XXII. Edited by Mrs. Maud H. Mellish-Wilson, Richard M. Hewitt, B.A., M.A., M.D., and Mildred A. Felker, B.S. Octavo Volume of 1125 pages with 234 illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$13.00 net.

In preparing the twenty-second volume of the Mayo Clinic papers the same policy as heretofore has been followed and only those papers that were thought to be of general interest to the profession have been published in full while others of less general interest have been abstracted only, while some three hundred or more are mentioned by title only. In this volume eighty-five papers are reproduced and they are all of sufficient interest and importance to place this volume among the especially desirable books for an up to date library.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume II, No. 3. (New York Number—June 1931) 239 pages with 73 illustrations. Per clinic year (February 1931 to December 1931). Paper, \$12.00; Cloth, \$16.00. Philadelphia and London: W. B. Saunders Company, 1931.

Lillienthal reports an interesting case of diaphragmatic hernia of liver. Pugh reports several interesting surgical kid-



ney cases. Donovan reports a series of abdominal cases with operations. Frankfeldt discusses some common rectal disorders. Berg shows some filarial lymphatic varices in the groin resembling hernias. There is a symposium on fractures participated in by Darrach, Murray conducting, and Bancroft, Scudder, Whitman and Whitman, Milliken, Beckman, Davidoff, Swift, Watters, Kennedy, Bartley, Heyl, Mage and Lowry. The subject of infections of the hip is presented by Sneed. Dudley presents some gall bladder cases. There are others of equal interest.

The Medical Clinics of North America. (Issued serially, one number every other month). Volume 15, Number 1. (Mayo Clinic Number—July 1931). Octavo of 263 pages with 56 illustrations. Per Clinic Year, July 1931 to May 1932. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1931.

Alvarez and Mayo have first place in this number of the Clinics with a report of the cure of pseudo-appendicitis. Lemon reports some rare intrathoracic tumors. Rowntree and Kintner discuss some problems in clinical diagnosis. Wilkins and Barnes discuss recovery after cardiac thrombosis. Vinson and Bumpus have a paper on pulmonary lithiasis. Comfort and Snell have a paper on the treatment of portal cirrhosis. Barborka has an interesting paper on the relation of diet to health and disease. There are several papers on peptic and duodenal ulcers. There are several reports of unusual cases of different kinds, unusual complications or unexpected findings. It is unnecessary to mention all of the subjects discussed in this number and since it is a Mayo number it will be of considerable interest to many of our readers on that account at least.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 14, Number 6, and Index Volume. (New York Number—May 1931). Octavo of 300 pages with 55 illustrations. Per Clinic year, July 1930 to May 1931. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1931.

In this number of the Clinics there are several articles and reports of cases that should be of considerable interest. Held and Goldbloom consider the mitral stenoses. LaChapelle and Graefe report some cases of subacute bacterial endo-

carditis. Tenney discusses the treatment of acute bacteremias and Lintz has a paper on acute bacteremia. Chickering has a paper on acute bacterial pneumonic infection. Squires and Belcher have one on acute bacterial intestinal infection. Bader has one on acute infections in children. Pugh has a clinic on gonorrhea in children. Kugelmass discusses the hemorrhage problem in the newborn. Rosenbluth and Block report some uncommon complications of lobar pneumonia. Highman discusses the nature of eczema. There are numerous other very interesting reports.

—R—

### International Interchange of Sanitary Information

According to a recent statement by the United States Public Health Service, as early as 1881 an international Sanitary Conference was held in Washington on call by the United States Government, which invited the maritime powers of the world to meet for the purpose of considering an international system of notification of the actual sanitary conditions of ports and places under the jurisdiction of such powers. Later conferences, in which the United States was represented, had for their purpose the formulation of international sanitary regulations and conventions. The Sanitary Convention of Paris, 1903, was ratified by the United States Senate by its resolution of March 1, 1905. The exchange of ratifications between the representatives of the participating powers took place in Paris on April 6, 1907. This action represents the most advanced step taken to that time for international control of epidemic diseases. With the great progress of the public health movement throughout the world and the marked advances in international sanitation, and increased knowledge of the causes of diseases and the manner of their spread, revision of the International Sanitary Convention was made from time to time to accord with sanitary progress. The last revision was signed at Paris by officers of the Service, representing the United States, on June 21, 1926. The revised convention was ratified by the United States Sen-

ate on March 22, 1928, and proclaimed by the President on June 21, 1928. The acceptance by the United States of the revised treaty is of great importance in international sanitary matters, such as maritime quarantine, the reporting of outbreaks of diseases, the sanitary precautions to be observed in infected ports, and other factors relating to concerted international control of sanitary conditions.

The International Health Office (Office International d'Hygiene Publique) was created and established in the French Office of Foreign Affairs by international agreement signed at Rome, December 9, 1907, for the collection and dissemination of epidemiological information under the provisions of the International Sanitary Convention, and to collect and bring to the knowledge of the participating governments facts and documents of a general character concerning public health, and especially regarding infectious diseases. The International Health Office performs its functions under the authority and supervision of a Permanent Committee composed of delegates of the contracting governments. The United States has always been represented on the Committee by a medical officer of the Public Health Service.

The Pan American Sanitary Bureau is another important body created for the control of the international spread of disease, but its activities are largely limited to the American republics, as the name implies. However, in 1928, the Pan American Sanitary Bureau by mutually satisfactory agreement, was designated by the International Health Office a regional co-operating agency, within the purview of Article 7 of the International Sanitary Convention, for the collection and dissemination of epidemiological intelligence in the participating countries. The Pan American Sanitary Conferences and the Pan American Sanitary Bureau were created by the Second International Conference of American States held in the City of Mexico, October 22, 1901, to January 31, 1902.

The Pan American Sanitary Bureau

is the permanent Executive Board of the Pan American Sanitary Conference, with headquarters at Washington, D. C. The United States has always been represented at Pan American Sanitary Conferences by a medical officer of the Public Health Service, and since its organization the Surgeon General of the Public Health Service has been the Director of the Pan American Sanitary Bureau. The usefulness of the Sanitary Bureau in the International control of disease by American Republics and its value in the settlement of vexatious sanitary problems with our neighboring nations can hardly be over estimated.

The Pan American Sanitary Code signed on November 14, 1924, by medical officers of the Public Health Service representing the United States and delegates of other American Republics represented at the Seventh Pan American Conference at Havana, was ratified by the Senate of the United States on February 23, 1925. This code is believed to be the most comprehensive and practical international sanitary instrument ever devised. Under the provisions of this treaty and the authorization of the quarantine act of 1893, medical officers of the Service, on request, have been loaned from time to time to several of the participating governments to assist in the reorganization of their health work, to advise in respect of the actual status of the communicable diseases of man and the sanitary measures to be taken for their control or eradication, and to report on the sanitary condition of ports and the presence of quarantinable diseases in accordance with the terms of the quarantine laws.

The relations of the Public Health Service with the Health Organization of the League of Nations are somewhat indirect. This international health organization was established by resolution of the Assembly of the League passed December 10, 1920, under authorization of the Covenant of the League which was formally adopted at a session of the Preliminary Peace Conference. Medical officers of the Public Health Service have been permitted and detailed to



serve in an advisory capacity on the Health Committee and on special committees of the Health Organization.

—R—

### **Effect of Hypothyroidism on Gastric and Intestinal Function**

From the study of a group of cases with lowered basal metabolic readings, a few cases of frank myxedema, or at least of the forme fruste, and a number of cases with readings lower than is usually regarded as a low normal reading, Thomas R. Brown, Baltimore (J.A. M.A., Aug. 22, 1931), draws the following conclusions: 1. There is no characteristic gastro-intestinal picture presented by this group of cases, the digestive symptoms, gastric or intestinal, being purely functional in nature and not at all different from those encountered in a variety of other conditions. 2. It is evident, however, that hypothyroidism, especially if the readings are very low, plays a considerable part in certain cases of intractable constipation not corrected by the usual means, which are not infrequently observed in women in the late forties or fifties; the incidence of hypothyroidism in such cases is shown by the marked success in regard to these symptoms under proper dosage of thyroid extract. As regards the gastric secretory condition in those cases with relatively slight basal reductions, that is, with readings between minus 10 and minus 20, the readings are quite normal, and there is no difference between these readings and those obtained in normal individuals; that is, those with readings from minus 10 to plus 10. On the other hand, in the cases with very low readings, minus 20 and below, there was a marked tendency to gastric subacidity, a considerable portion of the cases presenting achlorhydria. 3. In the cases of intractable constipation, especially in women in the forties and fifties, it is advisable to consider the possibility of an unrecognized hypothyroidism playing a part in the picture, which can be relatively easily determined by careful basal metabolic readings and by the effect of therapy with thyroid extract if the readings are low.

### **Diet in Intestinal Disorders**

According to J. Arnold Barger and Sister M. Victor, Rochester, Minn. (J.A. M.A., July 18, 1931), much confusion exists concerning foods to be eaten by persons who have intestinal disturbances. It is forgotten that the principal function of a major part of the large intestine is storage, that some absorption takes place in the right half of the colon, but that most of the digestion and absorption occurs in that part of the gastro-intestinal tract which is above the colon. The amount of confusion in regard to this is often startling, and it is not unusual to find people following totally inadequate diets for various actual or presumptive pathologic conditions. This is particularly emphasized when patients with inflammatory diseases of the colon present themselves for examination or observation. It is also forcibly brought to attention by the vast number of unfortunate persons who suffer from so-called irritable colon, with diarrhea of indeterminate origin, or constipation and intestinal flatulence. Perhaps too much attention has been paid to the food of patients with intestinal dysfunction. This view has its proponents and its antagonists. Primarily, many internal abdominal disturbances have been called colitis in which there was no demonstrable inflammation of the large intestine. The terms "mucous colitis," "spastic colitis," and many others, are badly chosen because they do not stand for colonic disease but rather for a single phase of a general bodily derangement, of which the basic phenomena are in the nervous system. Hence, in commenting on diet in intestinal disorders, there must first be a clearcut picture of the conditions for which such diet is advised. The authors outline helpful suggestions relative to diet for certain chronic ailments which afflict the intestine of man, such as chronic ulcerative colitis, diverticulosis and mild diverticulitis, malignant disease in its preoperative phase and certain postoperative complications. Also, they include the diet for persons who have undergone colostomy, and a few pertinent facts on the "irritable colon."

### Results of Sympathetic Ganglionectomy and Ramiscetomy for Chronic Arthritis

James R. Moore, Jerome, Ariz. (J.A.M.A., July 18, 1931), records some personal experiences in the onset, progress and treatment of arthritis, especially the reaction which he, as a physician, has experienced in the newer surgical methods of treatment; e. g., a quadrilateral sympathetic ganglionectomy and ramiscetomy. He summarizes his experiences thus: A case of arthritis developed without antecedent illness in himself, aged 36, when he had resided for many years previously in a warm, dry climate. The case became progressively worse in spite of the elimination of possible foci of infection combined with the usual and recognized methods of treatment over a period of three years. Marked improvement both subjectively and objectively and at least an apparent arrest of the progress of the disease were observed in both the upper and lower extremities following a quadrilateral sympathetic ganglionectomy and ramiscetomy. Improvement in general health and mental attitude followed closely on relief of the local joint condition. The author would not hesitate to recommend to any one suffering from arthritis the radical surgical procedure referred to, provided a fair trial had been given other recognized modes of treatment and the signs in the case were such as would indicate in the light of past experience that a favorable result might reasonably be expected.

### Carotinemia Resulting From Restricted Diet

Oscar L. Levin and Seymour H. Silvers, New York (J.A.M.A., June 27, 1931), report two cases of carotinemia which occurred in women who did not have diabetes, the discoloration in one of them being made more evident by continuing the ingestion and increasing the amount of carrots and oranges eaten. Aside from the pigmentation there are no other subjective or objective symptoms. It is possible that the condition may exist for variable periods of time before it may be perceived and made a complaint. Its differential diagnosis

from jaundice and disorders of pigmentation is facile. The prognosis is excellent, as the discoloration begins to fade rapidly with correction of this diet and elimination of the carotene-bearing foods. It is possible the observation of faddists or those employing a restricted diet for the reduction of weight may disclose some of these cases of carotinemia.

### Is Bronchoscopy Indicated In Tuberculosis?

Louis H. Clerf, Philadelphia (J.A.M.A., July 11, 1931), discusses bronchoscopy in pulmonary tuberculosis. The bronchoscopic conditions in tuberculous patients who developed unexplainable signs and symptoms are noted, and though the cause of these could not always be relieved, positive data were secured, which aided in intelligently treating the condition. Patients with obscure chest signs and symptoms were examined bronchoscopically to determine whether tuberculosis was present; others were correctly diagnosed when tuberculosis was unsuspected. The observations are recorded and the general indications for bronchoscopy are considered. The author believes that bronchoscopy is rarely indicated in uncomplicated pulmonary tuberculosis. The chief value of bronchoscopy in tuberculosis is its aid in the diagnosis of unexplainable signs and symptoms. Diagnostic bronchoscopy is indicated in cases presenting obscure pulmonary conditions in which tuberculosis may be suspected but cannot be proved. Absolute contraindications to bronchoscopy are few; in questionable cases the indications must be carefully considered.

### Postvaccinal Myelitis

Thomas William Brockbank, Washington, D. C., (J.A.M.A., July 25, 1931,) calls attention to the fact that the acute inflammatory lesions of the nervous system reported as occasionally following vaccination against smallpox usually have presented the clinical symptoms of encephalitis or poliomyelitis. In cases with paramount spinal cord involvement, even when the lesions accompany small-



pox itself, the sensory impairment has been negligible or transient. As a contrast to this generally accepted picture, he reports a case of postvaccinal myelitis with complete spinal anesthesia persisting up to the level of the ninth dorsal segment and paralysis. The clinical and laboratory signs of spinal meningomyelitis are presented. The sensory level seemed to indicate that the inflammation in the acute stage had progressed only to the level of the fifth dorsal segment, although motor signs pointed to mild inflammatory involvement in segments considerably higher. The sensory level two months after onset was in the eighth dorsal segment. The prodromal symptoms began on the thirteenth day after vaccination.

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#### **Diphtheria Toxoid (Diphtheria Antatoxinammon) in Infancy**

Joseph Greengard, Chicago (J.A.M.A., July 25, 1931), vaccinated 117 infants, ranging in age from 4 days to 2 years, against diphtheria with two 1 cc. doses of commercial diphtheria toxoid. Complete immunity, as measured by the Schick test, was obtained in 98 per cent of the infants. The appearance of immunity was quite rapid, a considerable proportion showing a negative Schick reaction two weeks after the second injection. Reactions were noted in only 2 of 147 cases; both of these were very mild. In a small group in whom the persistence of immunity was tested, one case occurred in which the Schick reaction turned positive six months after vaccination. Three cases of clinical diphtheria occurred during the period of investigation. One of these appeared in a vaccinated child with a succeeding negative Schick reaction. On the basis of his observations the author concludes that immunization against diphtheria, as measured by the Schick test, can be produced rapidly and safely in a high proportion of infants by the use of two 1 cc. injections of diphtheria toxoid.

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"When, As and If" the bottle fed baby exhibits symptoms indicating partial vitamin B deficiency—described by Hoobler as (1) anorexia (2) loss of

weight (3) spasticity of arms and legs (4) restlessness, fretfulness (5) pallor, low hemoglobin, etc.—Dextri-Maltose with Vitamin B may be used in adequate amounts (up to 71 Chick-Roscoe units) without causing digestive disturbance. This ethically advertised product derives its vitamin B complex from an extract of wheat germ rich in B and brewers yeast rich in G. Physicians who have attempted to make vitamin B additions to the infant's formula but who have been obliged to abandon same due to diarrheas or other unfortunate nutritional upsets, will welcome Mead's Dextri-Maltose with Vitamin B. This is a tested product with rich laboratory and clinical background and is made by Mead Johnson & Company, a house specializing in infant diet materials.

Not all infants require vitamin B supplements, but when the infant needs additional vitamin B, this product supplies it together with carbohydrate. In other cases, the carbohydrate of choice is Dextri-Maltose No. 1, 2 or 3.

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#### **Arsphenamine and Neoarsphenamine**

Comparisons of the therapeutic value of arsphenamine and neoarsphenamine must take into account the difference of arsenical content, which is one-third higher in the case of arsphenamine than in the case of neoarsphenamine. Even allowing for this difference, it is quite generally conceded that arsphenamine as such is therapeutically the more effective than neoarsphenamine. The evidence for the efficiency of neoarsphenamine is conspicuously small. The most carefully investigated and reported clinical material has been treated with arsphenamine rather than with neoarsphenamine. One of the characteristics of neoarsphenamine, which will affect any attempt to estimate its gross clinical value, is the marked variability between different lots of the preparation even from the same manufacturer. (J.A.M.A., Aug. 15, '31.)

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Voice (On phone): "Is the doctor in?"

Maid: "No sir, and I don't know how long he'll be. He's been called out on an eternity case."—College Humor.

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### The Physician and the Community

FREDERIC H. SLAYTON, M.D., Wichita

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

Throughout all ages every living organism has at some time during its life cycle been subject to disease and injury. Total immunity to the action of natural law has never been proven or demonstrated, nor has it ever been obtained by any sacrifice, prayer or code of laws or by any system of philosophy.

Nature is not always so kindly or beneficent as is frequently stated. Thus far in our human experience or knowledge, never has there been revealed any method whereby living things can invariably and successfully escape her immutable laws. Through such natural phenomena as storms, floods, droughts, earthquakes, disease and similar manifestations of her power, she maims, destroys and kills and produces havoc and destruction to all things. Though man cannot always escape these catastrophes he has by observation and experience learned something of the laws governing these phenomena and has erected safeguards, and introduced protective measures which have been partially successful.

Beginning with the earliest history available, we find that primitive man began to think about those untoward occurrences which so vitally affected his existence and he realized that he must do something. Reasoning to himself that every thing which occurred must be due to some outside force or to mysterious spirits, he attributed *natural phenomena* to a *supernatural origin*. Having no knowledge of natural laws, he sought to circumvent these strange and mystic powers by offering up sacrifices of his most precious things. By mystic rites, prayers and offerings of material things he tried to propitiate the wrath of the evil spirits and to gain the favor of the

offended gods and unseen powers. Sickness and pestilence must have been one of his ever present troubles. These were likewise supposed to be caused by evil spirits and were treated as were his other troublesome things. Thus began man's earliest attempts at self preservation, which may have been the origin of religion.

These early methods to thwart or overcome the effects of untoward natural laws have been superseded by the acquisition of more knowledge and enlightenment concerning those laws with a steady and orderly evolution forward to the present time. While obstacles of one kind or another have hindered forward progress, they are always pushed aside by the steady march of the seekers of truth and fact. Perfection has not been attained and probably never will be, but the resistless quest for truth will continue onward and new knowledge will inevitably result. We can assert with every assurance of its truth that medicine has discarded all vestige of superstition and is a *real science* in its fundamentals. It is always seeking to know regarding the greater matters and is likewise concerned with the lesser and accessory things.

With this sketchy historical background in mind, we can easily visualize and trace the evolution of the physician and his relation to the community. When the prehistoric tribes of men were battling the elements, interpreting their troubles as due to evil spirits, they made sacrifices, performed ceremonies, wore charms, used herbs and material things and in simple ways sought to appease the evil spirits and avert their power. In the execution of these rites, undoubtedly some members became more expert than others and as fame came to them, they continually sought new things and methods which would render secure their position and enhance their distinction



still more. The benefit to the tribe was more or less incidental. Placed upon a higher plane than their associates, these individuals were trusted and granted almost supreme power in tribal relationships. They were revered and worshiped with a blind and consuming faith. This is not a fanciful story, as numerous tribes of primitive people now existent furnish living example. Thus the medicine man and priest came into being, and in some form or another has continued ever since. Elaboration of these ideas gives us some enlightenment for explaining the individualism which has always characterized the physician.

Some of this same trust, reverence and worship of the medical man exists today, but it is not nearly so prevalent as formerly. It occurs frequently enough, however, to make us wonder just how much we merit it and what our obligations are to the patients who come to us. Is it purely a case of dollars and cents or something beyond and above that? If our services are on sale for a monetary return, is it pertinent to wonder what sort of merchandise we sell, and how competent we are to run a medical mart?

I am sure that no honorable ethical physician has entirely discarded the old thought of service and helpfulness in favor of the dollar, even though that faith is sometimes shaken by the knowledge of the secret buying and selling of patients on a commission basis, if not to the highest bidder, or at least to the keenest bidder. Secret fee splitting is plainly a transaction for financial gain carried out by various subterfuges. The moral odium of this nefarious practice destroys any scientific surgical or medical judgment or knowledge possessed by the parties who engage in this practice. We are perhaps fortunate in Kansas, since we have a law making the secret division of fees a misdemeanor, but are unfortunate in that so far as can be learned there has never been much attempt to enforce it, either by the constituted authorities or by our own societies. It is still a secret slimy procedure that dislikes public mention since its participants desire to avoid adverse public opinion or professional condemnation.

It is quite evident that the greater the incompetency of the bidder, the greater will be the amount paid for referred business. Our knowledge of the incompetency of some of the men who are the recipients of a large volume of referred patients permits the deduction that the family physician is either grossly ignorant or is a traitor to the trust reposed in him by the family. One cannot conceive of a greater prostitution of confidence, or of a situation more dangerous to a community than to have to depend upon physicians who uphold, condone or practice this inhuman business. Give what explanation you will, scoff and sneer and belittle idealism or defend the act as you may, every honest conscientious physician must give serious consideration to this far too common practice as a grave menace of a really sacred relationship.

We have all lived through a period of tremendous progress of our profession, and in a measure this has been due to the confidence reposed in us by the public, as evidenced by the financial support. Large sums of money have been invested in foundations pertaining to human welfare and equally huge amounts of money have builded schools of medicine, and schools of related sciences. Hospitals and facilities to care for the sick have been provided very generously. People seek our services much more frequently, and more intelligently than they did a generation ago. Surgery is accepted and sought without so much fear and dread as formerly and people exhibit almost blind faith in its curative power, giving scant thought to the dangers involved. Are we not morally obligated by this trust to eternally guard the character of our work and be worthy in all respects?

It is a very encouraging sign to know that within our own ranks men like Codman of Boston, Poole of New York, Willis of Richmond, and Bernheim of Baltimore frankly challenge us to evaluate our services in the care of the sick in terms of end results. That some sort of supervision with a checking of results on some sane testing ground must be done by the profession itself is a proposition

that is not debatable. Let us not rest in quiet contentment that all is well, for it is not. We have only to look around to find evidence that is very disconcerting, and indeed alarming. The various cults and ologies are thriving, and are growing in power. A review of legislation proposed or enacted in the various states testifies to the power of these groups in breaking down or attempting to destroy what we contend are proper defenses for the public welfare.

When a patient comes to us, he rightly expects and deserves competency in us. How many of us dare to search our professional records and analyze our successes and failures? Do we dare to show end results? Of course the physician who makes or keeps a clinical history of his patient is rare. Even those patients whose condition warrants a stay in a hospital seldom have a history or record written by the attending physician. How many of our cases are thoroughly studied clinically, and tested by readily available laboratory methods? How many diagnoses are written and placed on the record before the patient goes to the operating room? What method is used to evaluate the chances or risks that the average patient must take when surgery is proposed, and if such evaluation is made, are the reasons for such an estimate given?

I firmly believe that the time is coming when the medical profession itself must analyze and determine the competency of every physician and surgeon. The mere passing of examination in colleges or under State Boards of Health do not necessarily protect the public nor adequately determine the fitness of the practitioner to undertake every kind of treatment. This assertion will be acknowledged to be true by the thoughtful conscientious physician. A great deal of studious attention has been given to this subject by earnest men who have come to the conclusion that a real necessity of finding some measuring stick to do this job exists. Rationally applied in a limited field, and used more extensively in hospital practice, a record of success or failure attendant upon every physician's

work would permit of a general evaluation of diagnostic methods and therapeutic measures that would outweigh individual hurts. All of this sounds very altruistic, but I am convinced that it won't be long before the state, representing the public will demand it, unless our own professional bodies proceed to inaugurate some plan designed to weed out incompetents and undesirables. However, I am quite sure that right now you are discounting these thoughts considerably because the debasing spectacle of a supposedly enlightened civic community supporting an alleged quack to become their chief executive comes to your mind, *and I think maybe you are right* for the moment.

Another obligation which we are bound to honor is to maintain the profession of medicine as an art based upon the best science available to mankind, and interpreted and applied intelligently. Knowledge is secured through human endeavor which, we freely admit, is always fallible and therefore our sciences are subject to constant change and revision. We know that some of the principles of good practice of bygone years do not receive recognition today. Our foundations are always shifting and changing, and as we abandon the old ideas let us be careful of the correctness and reasonableness of the new ones. We must build our scientific foundations securely and progressively advance in our knowledge of rational procedure. Some one has said the scientific mind is the most honest mind. We should maintain and make good that assertion, for in no other way can the cults, isms and trickery be successfully opposed. Truth will exist and fallacy will subside and die out.

In order to justify our position as a scientific entity, we owe to the public our best efforts in enlightening them in the branches of the sciences with which we deal. We have perhaps been somewhat hidebound in this respect. Maybe it is a throw back to the early days of our history already mentioned where the medicine man maintained his supremacy by not educating his tribal brothers too much.



Serious consideration should be given by the medical profession to *mass* advertising as a means of mass enlightenment. This advertising could be dignified, informative, and deal with those facts which the public should possess. It should not in any sense be self laudatory nor exhibit a superiority complex, but rather should relate basic scientific truths of an educational character. Mass intelligence isn't so very far advanced and especially as related to the sciences, which indicates that we should do our part in adding to the general intelligence of the laity.

The American Medical Association could well endorse publicity of the right sort and in fact have done so in their publication "Hygeia" which is manifestly designed to do just what I have tried to describe. It is an admirable periodical full of instructive and valuable material; indeed it would furnish a good background for local publicity. The Association could edit and advise as to the correct subject matter and form, arrange campaigns and in a general way, through its central office, direct proper publicity for local application and use. They are now giving this service for broadcasting, lectures, etc.

We are in a transitional period right now and the public voice is heard very loud in regard to our profession and its alleged faults, etc.

State medicine, or the taking over by the state of the care of the sick is a thing which concerns all of us. Certainly no one in the profession can view such a radical change in policy without raising his voice against it. We have numerous examples in foreign countries of the faults of the state control of the practice of medicine. Mere failure to approve will not stop this proposed assumption of duty. The reasons which actuate this proposal are numerous, but the theme song usually is the high cost of medical care. When the pocketbook comes into the discussion, the public is easily swayed by careless reasoning, and persuaded to inaugurate unsound procedures. We can not here enter into any argument covering costs, but we must

clearly interpret the trend of the times and realize that the stage is being set for a change in medical matters. Give serious thought to this subject and inform yourself carefully, fully and without prejudice, that you may intelligently co-operate and judicially influence others to avert this condition. Whether we like it or not, we are facing the need of *leading or being led*.

Without in any way belittling the hospitals, one cannot fail to note that the medical staff has very little voice in its management or conduct. The hospital management furnishes pathologists, x-ray men, internes, anesthetists and other key men far too often without any consultation with the professional staff. It is not entirely the fault of the hospital that these conditions obtain, since the staff members do not always work in harmony, frequently fail to function effectually and passively let some one else do the job. Staff meetings should be much more than perfunctory proceedings, and if such meetings are irksome, we should blame our own lassitude and admit our own failure to fulfill our duty.

There are many other phases of our obligation to ourselves and our communities that might be considered profitably analyzed and earnestly studied, but this is manifestly impossible in the allotted time. We can, however, summarize by frankly and honestly admitting to ourselves our own imperfections and shortcomings. Only then can we rationally proceed toward their correction by a mutual study actuated by a movement within our own ranks. Under no condition can we wait until some governmental body proceeds to legislate on this matter. We know full well that we would immediately become mere pawns of the politician and hirelings of low degree.

I do not apologize if this presentation sounds like a sermon reeking with idealism and full of platitudes. Medicine has never advanced to its present high place by the contribution of the butter and egg type of physician. We need to think intelligently, study profoundly and to develop by self study some constructive and practical ideas founded on a higher

plane than income. We are not merchandising our professional services, but we are trying to practice our art in a dignified way which will earn a legitimate reward commensurate with the service rendered.

Let me plead in no uncertain terms that we drop petty bickerings, forget childish jealousies, and like grown men, conscious of our greater responsibilities, co-operate to the end that our traditions may be preserved. While maintaining our individualism in the proper way, let's think clearly and act together sanely. The community will respond and give us our just due. Mass effort, rationally directed, can accomplish much.

At this time may we review the points which we are attempting to place before you.

First, we are not merchants nor traders but are attempting as best we can to practice the art of our profession.

Second, we are seekers of truth and always striving to learn facts.

Third, that we continually study our own deficiencies to the end that we may increase our usefulness.

Fourth, that as we gain in knowledge, we give it freely to the public for its use and benefit.

If these things are as important as some of us think, shouldn't the public be informed of our ideals?

In this brief effort to analyze our behaviorism in relation to our obligations to the public, we trust that no one will accuse us of being pessimistic, nor assert that we are trying to indict the whole profession. While we have some undesirables in our professional ranks, we also have some very noble characters to whom we all bow graciously and gladly, recognizing their sincerity and honesty of purpose as well as their achievements.

————— R —————

A visitor called at a doctor's house.

"Is your father at home, dear?" he asked the doctor's small daughter.

"No, he's out, giving an anaesthetic!"

"An anaesthetic! That's a big word. What does it mean?"

"Ten dollars," was the reply.—College Humor.

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"A sharp nose indicates curiosity," says a critic. A flattened nose often indicates too much curiosity.

## The Present Medical Situation

C. D. McKEOWN, M.D., Wichita

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

Despite the ability of the Medical Profession to drop the death rate sharply in the past twenty years, with a steady increase in population; despite the fact that the rank and file of the Medical Profession, specialist and general practitioner, are earnestly laboring for the common good of the people, being honest, conscientious, carrying on their work to the best of their ability; despite the near miraculous saving of lives—that thing which above all else man loves and tries to prolong to the last possible minute; despite self sacrifice of time and money to the cause of benefitting humanity, by ever advancing the science of the practice of medicine, always to the advantage of the patient and much of the time to the financial detriment of the physician; despite the fact that our zeal in preventive medicine has been called professional suicide; yet, the laity holds a contemptuous disdain for the profession at large. We are criticised, analyzed, censured, lambasted, exploited, judged, and no longer occupy the place of honor the profession once held.

Every indication points to the general opinion that we need to be taken in tow, told what to do, how to do it, and what we are to gain financially for doing it. I refer now specifically to generalized articles in newspapers and magazines criticising the profession as a whole and fostering state medicine.

Have our aspirations been too high? Have we built up such a colossal giant of power for good that like great empires it must fall? Has the cloud of problems reached a stage it cannot be solved by the laity, therefore must be dissolved and something more easily understood substituted, such as some form of state medicine, health insurance, etc.

Now why this distrust, this annoying disturbance, which seems to blast at the foundations and traditions upon which our profession was built? First let us consider what constitutes a profession.



"If there is such a thing as a profession, as a concept distinct from a vocation it must consist in the ideals which its members maintain, the dignity of character which they bring to the performance of their duties, and the austerity of the self imposed traditions so potent as to bring into conformity members whose personal standards of conduct are at a lower level, and to have an elevating and ennobling effect on those members. A profession cannot be created by resolution or become such over night. It requires many years for its development and they must be years of self denial, years when success by base means is scorned, years when no results bring honor except those free from the taint of unworthy methods." (W. A. Shumaker, editor of Law Notes.)

If the above quotation be true our problem as to why distrust has come is solved, for that definition is what we are not. Is success by base means scorned? Do we obtain patients by unworthy methods?

We, in our profession, have a fine code of ethics laid down. It consists of doing or saying nothing which will give one an unfair advantage of another. Those are the principles upon which our profession was builded and upon which it must stand. Do not think that we can go on indefinitely, fighting, quarreling, bickering among ourselves and stand. The inside of our house must be set right before we can regain, and retain the trust formerly put in our profession by the masses of people.

There is no need to go into details concerning the responsibility of our present position. With few exceptions each of us shares that responsibility, and probably none has escaped it entirely. I despise to bring out skeletons, but let us be fair to ourselves and see if two things have not caused our downfall, viz., jealousy and greed. I mean that we are greedy for business, and we should naturally be that, but are we jealous enough to use unfair methods in obtaining any part of it? Just a little knock, a slighting word, or an off hand implication? Those are the serious things which have been transmitted to the laity

which are causing our present turmoil. I fully believe that that is so universally done and the laity has heard it so often that they have come to look upon us as we have told them so many times. In other words we have them convinced that we are at loggerheads with each other, and are no longer worthy of their confidence. And, now, since we have them convinced, but do not believe so ourselves, what are we to do to regain this lost faith in our integrity and ability?

I hear you say we are getting along fine, nothing has happened yet, so why be worried, or borrow trouble? Well what do you think of this article, by a physician, published in a magazine which reaches millions of laymen: "About 80 per cent of surgical operations done in this country are unnecessary and about 40 per cent are actually harmful. When a fellow with a surgeon's mind, which in general is a pretty simple organism you know, child like, has learned to do an operation dexterously and without too high a death rate, he is perfectly fascinated by his accomplishment. He naturally wants to do it all the time, and sees in everyone a proper victim for that procedure." What do you think of that for creating distrust toward any physician?

Besides distrust an equally great and more measured force is being builded up rapidly around us, the economic force. People are thrilled and chagrined at the vast estates built up from the practice of medicine. Men and women enter the field from the brighter side, not knowing the terrific struggle of competition until they are engulfed by it. The people seeing the few judge the whole, and their foundation is laid for a more economical medical service.

For many reasons the medical cost of the day is high. The cost of the physician is not high, but when we add hospital, specialist, expensive equipment and drugs the total cost admittedly is stupendous.

Here then is another problem which is necessary for us to solve. I say necessary for us to solve because the demand is becoming so great that if we do not solve it ourselves it will be solved for us.

Much of this problem may and will be

solved by the individual physician. The present economic state has automatically been instrumental in a great saving to patients. I refer to unnecessary hospitalization of many patients who could be equally well diagnosed and treated at home. Unnecessary tests, examinations, and routines of all kinds. Certainly a large group of patients need this, but as certainly, another large group can be handled at home by careful study, observation, and examination, adding careful physiological therapy. This idea is not at all new, but by it we attain more confidence in ourselves, widen our scope of usefulness, and build greater confidence among our families. Other phases of this economic problem should be worked out by us as a group.

Aside from the economic phase, it seems that the greatest need, at present, is establishing or increasing the public confidence in the family practitioner. So many bombardments have been the vogue in the past few years, in the public press, many of which have apparently been inspired by the limited practitioner, or the cultist, that some very definite work should be done by organized medicine itself to combat these attacks.

People are interested in their own health, the ways and wherefores, and are unable to understand the attitude of shameful hiding out which we assume. We must come out into the open and give the individual our ideals. Create a healthy mind and it will be educated. Health is the basis of individual, social, and economic welfare, and when it is understood that the health of the nation is our high stake, our former high position among the people will be regained.

Science has gained so rapidly, and so amazingly, in the last part of the last century, and the early part of the present one, that we are absorbed in it and the masses have not followed us.

Let us look briefly at what others say concerning our future: Our local papers quoted from, and commented on, the report of our Committee on the Costs of Medical Care at the Endicott-Johnson Corporation. Note, if you please, this widely circulated article: "Uncounted numbers of men and women in the United

States are suffering from the present faulty organization of medical service. If I die my life insurance will keep my family, why cannot I be protected where protection is most likely to be needed (illness)? Too many people are asking that question to be denied long. If the doctors fail to find the answer themselves, someone else, or the government, will. Never has there been such acute public dissatisfaction with the organization of medical service as there is at the present. The medical profession has now seen the handwriting on the wall. Something must be done." Another from California: "There seems to come an increasingly intelligible pronouncement that some form of state medicine, or health insurance, is inevitable here."

Witness also the many health plans devised for us, viz., The Harvard, Cornell, M. L. Harris, Coffey, etc.

You can readily see that we are drifting into a situation which is not clear to us where we will land, and when we land, whether we will be on top, with regained public confidence, or whether we will stand by and be hedged into further unpopularity, and have a dictatorship placed over us. It would seem that the time is close at hand for us to be humiliated, unless we come quickly to the realization of our present predicament and correct it. We can keep our heads buried in the sand by not reading or hearing, but when the blow comes, we will wish we had seen it coming, so we could have dodged it.

What is the cure? A disease which has many remedies offered has no specific. You see from the many curative plans devised that no satisfactory cure of our present precarious position has been found. Much, however, can be done.

Rather than our present attitude of silent condemnation we can lead them out with a watchful, aggressive, convincing force. We can assert ourselves in some manner to the people, by forming civic organizations, famous for their public education and service. This has been done in different localities by having a full time executive officer to form a liaison between the physician and the public. That will help the physician and



the layman adjust themselves to each other in these changing conditions of society. He fosters public confidence in us as physicians, as men, as to our ability, as to our high purpose, in a manner that no physician would be able to do. He sees us from a layman's viewpoint and gives us an opportunity to correct our faults, equally as well he can point out our good qualities to the layman.

What should we do about state medicine? Should we stand solidly back of no, no, no, should we face the problem and solve it, to the best advantage of all concerned? There should be a solution and it would seem proper and right for us to devise a system which would give that class unable to pay, good medical services, and include in that system some method of being decently paid for those services.

If we could devise that system, and organize ourselves properly, as other businesses comparable in size of ours have, we would assure more satisfactory services, and a better class of work, than the majority of them are able to obtain under our present hit and miss system, and at the same time be remunerated for a greater part of our services. The system could be devised so that the physician could choose between private and public services. Surely many of us would prefer a stated income to our present uncertainty of income.

Perhaps we should let well enough alone, and do nothing about the present medical unrest. But I believe something will be done before many years pass. Many do not want to increase the complexities of an apparently unsolvable problem, but the public must be served medically, the same as they demand the best and cheapest from others serving them. Certainly politics, graft, etc., will enter into any such system, but we have the ability to clarify them better than anyone outside our profession.

In conclusion, let us learn not stagnate, advance not retreat, lead not follow, create not copy, command not obey, succeed not fail.

### Modern Functions of the County Medical Society

WILLIAM J. BURNS, L.L.B., Detroit, Mich.

Mr. Burns, who is Executive Secretary of the Wayne County Medical Society of Detroit, Michigan, presented this paper before the Sedgwick County Medical Society, Wichita, Kansas, on Tuesday, March 3, 1931.

Your Program Committee has been very kind in inviting me to Wichita to give you a few slants upon the work and problems of the county medical society and to speak upon some exceptional activities and pioneering steps being sponsored in certain cities which are bound to exert a growing influence upon every individual medical society in the country.

Every county should have its medical society and to insure success in all its undertakings, there should be but one and only one unit. In the larger cities special groups may be organized, such as a medical section or a surgical section, but for the sake of complete harmony and permanent good to the local profession and to the public, each and every medical group should be an integral part of the parent medical society.

Among the modern functions which are being sponsored by progressive county medical societies in the United States may be listed: (1) Definite organization along economic and administrative lines such as has proven successful in the business world; (2) A program of education and service to the profession and to the public, which includes daily or weekly newspaper columns, speakers' bureaus, physicians' telephone exchanges and collections and credit bureaus, etc.; and (3) a very satisfactory welfare program, which includes co-operation with the judiciary, and close contacts with newspapers, business leaders, civic officials, legislators and other office-holders.

#### DEFINITE ORGANIZATION

Realizing that the county medical society must be the center of medical activity in the community, officers of many such units in the United States are reorganizing their societies along business lines and placing the administration of the association's affairs in the hands of a full time manager. The society's importance to the community is too great to hazard it by a careless or indifferent attitude. Outside interests have already at-

tempted to lessen the influence of the county medical society. Now is the time to step in and by positive activity save the situation before it is too late. Better business administration means better programs, larger attendance, greater influence and enhanced prestige to the whole profession, with resulting benefits to the individual practitioner. Members of smaller county societies know the advantages of joint meetings with neighboring societies, for example, the enthusiasm and benefits of a tri-county meeting. The day must come when not only will every larger society have a definite program along economic lines, but the smaller counties will unite in groups of three, four, five or six societies, outline a co-operative plan of progress and employ a full-time individual to execute the business details. Good results must follow. This plan is to the interests of the individual practitioner of medicine.

#### A BULLETIN AND CORRESPONDENCE

Wherever possible, county medical societies should publish a bulletin. It is one way to keep up the interest of the membership, and to tell the world what the local medical profession is doing for the community good. In addition, a bulletin in the hands of a live business manager can be a source of revenue, as many manufacturers are glad of an opportunity to use the medical man's publication to advertise their products. The mailing list of a medical "house organ" can include the names of physicians in neighboring cities and also prominent laymen, and can be the means of increasing the prestige of the medical men who publish it. The full-time man should assume the routine work of accumulating material, make-up, editing and proof reading in order to save hours of time for the medical editor and his staff.

Another matter that deserves the close attention of a full-time secretary is the society's correspondence. Every letter should be given immediate attention. Many letters received by a county medical society are of controversial nature. Because of their contact with important outside influence, others require careful study and minute consideration to avoid embarrassments for the society. Some-

one should be responsible for the procuring of desired information or performing of requested services and for promptly acknowledging and satisfactorily answering all letters.

#### PROGRAM OF EDUCATION

The movement of popular medicine had its origin some years ago, and, through the stimulation of the American Medical Association, has developed from small beginnings until it has become a very influential organization in some county medical societies of the United States.

#### EDUCATION COMMITTEE WORK

In Toledo, Ohio, it was my privilege to see an educational program launched and developed. For years back several of the more foresighted members of this county medical society realized the value of a program of popular medical education. It remained simply to put it into being. Numerous meetings were held over the luncheon table to discuss ways and means. At one notable meeting back in 1924, the officers of the society decided finally that problems dealing with clinic abuse, contract practice, unethical conduct, fraudulent advertising, quackery, misinformation of the public on matters of health, and a host of other things could be best met by broadcasting first hand the doctors' viewpoint on these medical matters, rather than the laymen's. This was a departure from the old notion of keeping silence on such questions from a mistaken idea of "ethics." This position is hardly tenable. The distinction has well been made between "advertising," which is closed to the physician as an individual, and "publicity," which is open to the profession as a whole. Not all the members, however, were sold on the soundness of the idea. You gentlemen probably will encounter the same condition in your own ranks; yet it is clear that your responsibility as guardians of the public health demands that you take more than a passive interest in such matters. In addition, your acceptance of this obligation will result in increasing your financial as well as your scientific revenue.

The officers of the Toledo Academy decided definitely on the necessity of



forming an Education Committee to look after these matters in point. Such a committee would bring about a better relation between the public and the profession, which would be of advantage to both.

#### DAILY NEWSPAPER COLUMN

The beginning of popular medical education in Toledo was made early in 1926 with weekly health articles in two of the leading papers. The committee's plans were visionary. It had no precedent to follow. Few realized its possibilities. The first year was spent mainly in building up experiences and gaining contacts. It can truthfully be said that it sold the idea of honest guidance and authentic information in medical matters to the newspapers and the public. This was a worth-while accomplishment. But the committee quickly realized that the infrequency of appearance of its articles would lose force. Plans were set afoot to publish a daily medical article. This was a radical innovation in newspaper circles. True it is that daily newspaper medical articles had appeared previously in syndicated form. These, however, reflected only individual opinion in medicine. The "Said by Toledo Doctors" column, with its daily article, attempted to reflect the accepted opinion of the bulk of the medical profession. In this respect, it pioneered.

On February 27, 1927, the new column was inaugurated. During the next two years, a daily article was printed, followed by a "Question Box." Society members submitted articles to the Publications Bureau, which revised and edited them to fit into the program. Names of physicians were not signed to the articles. Self-diagnosis and self-medication were discouraged. The motto throughout was: "See your doctor first."

#### SPEAKERS' BUREAU

Realizing that the Speakers' Bureau was a necessary adjunct to the work of the Publications Bureau, this department was formed in 1927. For the first half year it worked sporadically. But the profession realized that the Speakers' Bureau was a powerful and valuable arm in bringing the medical man in di-

rect contact with the public, so a concerted effort was made to boom this feature. The result was that during 1928 and 1929 the Speakers' Bureau sent out an average of ten lecturers each month to address lay organizations, civic clubs, etc. The public seemed to be hungry for information dealing with its health. These two departments, the Publications Bureau and the Speakers' Bureau, had a far-reaching effect. In Toledo, they did more than all the preaching in the world to counteract the propaganda of the quack and the pseudo-medical man. They established the doctor in the hearts of the people. More important, they made patients proud of their own doctor, and resulted in building up that confidence which is so necessary in the successful care of a patient.

With a full time secretary, any county medical society or group of societies could establish a Speakers' Bureau, and institute a weekly or more frequent newspaper column, with far-reaching and beneficial effects to the organization and its members.

#### PROGRAM OF SERVICE

A modern county medical society cannot do full justice to its members and to the public by a program of education alone. It must augment it with a program of service. A collection and credit bureau and a physicians' telephone exchange are two good items in a program of service. In competent hands, both can be profit-making activities. Here is a brief consideration of each plan.

#### CREDITS AND COLLECTIONS

For sixteen years, the Wayne County Medical Society of Detroit has successfully maintained a physicians' business bureau. For obvious reasons, this bureau uses a different name than that of the society and has its own business office; however, it is controlled by a committee of physicians from the Society.

It offers three distinct services to every individual member of the Society: first, credit ratings on every person who visits the doctor's office can be obtained, in case a physician doubts the paying ability or paying inclination of his patient; second, the Delinquent Account

Letter Service can be used whereby a letter series is mailed by the Bureau to slow-pay patients to aid the doctor's collections; third, the collection division offers its dependable help to the physician who wishes to have his older accounts adjusted or financed.

Annually, the Bureau sponsors a lecture course on "Economics." These talks, given by prominent laymen who are specialists in their fields, are presented at the regular weekly meetings of the Society during one particular month. Physicians, their office secretaries, bookkeepers, workers in hospital offices, and all others interested in the business side of a doctor's practice are invited. This past year the subjects of the lectures were: "Systematizing the Office Records" given by D. J. Terpeney, Dean of the School of Commerce, Detroit; "Credit Information," by Lee S. Carrick, Service Director of an industrial bank of Detroit; "Suggested Aids in the Collection of Accounts by Physicians," by Grahame Coffee, Collection Manager of Detroit's largest department store; and "Two Prescriptions: (1) Better Cooperation Betwixt You and Us; (2) Investment Buying by Doctors," by Kenneth Barnard, Manager of the Better Business Bureau of Detroit.

Along similar lines, another activity of a county medical society can be the publication of a "Confidential List for Members Only." This private list, added to monthly, contains the names of people with whom the society members have experienced unsatisfactory financial relations. (This is sometimes referred to as the "Deadbeat" list and of course is in code, to eliminate the possibility of law suits). A copy of this list is mailed to each member so that he may study it whenever a new and questionable patient appears in his office for service. A master-list should be kept in the office of the medical society.

#### PHYSICIANS' TELEPHONE EXCHANGE

A county medical society activity which is spreading across the country is the physicians' telephone exchange. In a certain midwestern city, such a bureau has been running twenty-four hours per

day since August 1, 1925. It was started with a campaign for members. Approximately 100 subscribers joined before operations were begun. This number increased gradually to 160 (close to 50 per cent of the active membership) and this is believed to be the saturation point. The subscribers are assessed \$3.50 per month, payable quarterly, for this extra service. It is owned and controlled by the society, with the board of trustees acting as a supervising committee, but it is operated as a separate entity. The bureau is not incorporated but is classed as a department of the society, which is incorporated not for profit. The Doctors' Service Bureau has its own employees and its own system of bookkeeping; the bureau has nothing to do with the general funds of the county medical society. The main object of a physicians' service bureau is to be a connecting link between the doctor and his patients. Most of this bureau's work consists in patients calling for their family physician or making appointments with a specialist, which is desirable business. It gets a share of emergency calls but these are necessary evils. Often there is no remuneration to the doctor for such work. But such a bureau, being a quasi-public agency, must accept the good with the bad.

#### METHODS OF ADVERTISING BUREAU

Physicians use verbal and printed advertisements to convey to their patients that they can be obtained at any time through the medium of Doctors' Service Bureau. They mail out dodgers with their monthly statements. In addition, every pay-telephone in the city is covered by placards. Doctors have placards, of a better quality, in their waiting rooms also. Newspaper advertising has been tried but it is very costly, and results are somewhat doubtful. One feels that it appeals to that element which the Bureau is trying to avoid. The doctor is the best medium of advertising and he reaches the best people. However, newspaper advertising may be good at the time of inaugurating a service bureau, just to put over the name and telephone number. A new Bureau should try to get



a number which can be remembered easily by morons (they will be very good customers of a doctors' bureau). Main 1234 is ideal. Toledo had to accept Main 2176, but attempted to popularize it with this tid-bit: "Are you 21? Do you remember the Spirit of '76? Then you should remember Main 2176."

Some doctors keep in touch with the Bureau every two hours. Others are careless. Naturally, the former receive better service as the operators are able to locate them very easily. A successful Bureau must be manned by a corps of loyal, enthusiastic assistants. Let me repeat that without constant enthusiasm on the part of the employees, a Service Bureau would be lost. Each assistant must know every subscriber's idiosyncrasies and act accordingly. You must admit it is quite a nerve-wracking job.

#### TELEPHONE EXTENSIONS

Forty-six subscribers have installed direct telephone extensions from their offices or residents (or both) to the Doctors' Service Bureau offices. A special switchboard (called a "Stopboard" by the telephone company) has been installed which combines main trunk lines and these extensions. Every time the telephone rings in the doctor's office or residence, a light signal is received in the Bureau office. If the doctor fails to answer, the operator takes the call and holds the message until the doctor returns. In this way, no business is lost. It is a boon to the younger man who cannot afford the expense of even an eight-hour office assistant, not to speak of twenty-four hour telephone coverage. The subscriber pays the telephone company a sum for this extension equal to the aerial distance from his office or residence to the Bureau office. Most of the Toledo men pay about \$5.00 per month to the telephone company. Others, living greater distances, pay more.

The operation of a physicians' service bureau brings with it loads of grief. Just try to please everybody! But it is worth all the trouble. A bureau helps to pep up the society and makes it the center of medical activity in the city. It helps to unify the doctors, which seems to be a

problem in every city, town and hamlet. The advantages seem to outweigh, by far, the troubles. Many people now come to the society headquarters for medical and miscellaneous information, including opinions on quacks, and it is felt the bureau has been largely the cause of this decided advantage.

The experience in Toledo has proven that a physicians' service bureau should be owned and controlled by the doctors themselves, and not by an outside agency. It is a case of the doctors running their own business, which is very important. Before a medical society begins to operate a bureau, it should buy out or amalgamate with all medical service bureaus in the city. There should be no competition. If there are two or three agencies in existence, confusion on the part of the public, and constant annoyance to the doctors will be the inevitable result. There should be but one bureau, under the control of the medical society.

#### MEDICAL DEFENSE

Another valuable item in a program of service is medical defense against malpractice suits. In Michigan, two dollars of the dues sent to the State Society go to a Medical Defense Fund. It is interesting to note that in the city of Detroit, not one malpractice suit has been lost by a physician during the past three years. It pays to be organized.

In these days of depression, you all have seen the first signs of the loss of people's individualism by a willingness to accept medical charity. Immediately there is developed a peculiarly progressive psychological trait. Persons who first barely accept medical aid, subsequently ask for it, and finally demand it. Sooner or later, they go after all commodities in the same way. One can see, therefore, that the doctor is in the front line trenches in the defense against this social holocaust. The man in business with telescopic and tubular vision watches the conflict. With this type of sight he feels that the war is a long way off and that there are no flanking movements. As the battle progresses, he feels quite smug. He is perfectly confident this is the doctor's problem alone, and

that he will never be anything but an observer. Very shortly, however, and much to his surprise and chagrin, the dole system is at his door.

You can see, therefore, that as physicians are in the front line trenches, they require a headquarters with an efficient staff manning it. The service which this headquarters performs for the individual medical man is soon well known and felt by him. It is one of the reasons why he is so sold on the work of modern medical organization—it achieves results.

#### CLUB FACILITIES

The Wayne County Medical Society of Detroit has luxurious club rooms, a cafe, and a roof garden for the use of its members. Originally, it purchased a residence for \$17,500 which, in the boom of 1926 was sold for \$110,000. Plans for the erection or purchase of another "home" are now before the Board of Trustees. The present leased headquarters occupy the eleventh floor of a skyscraper facing the Art Center. The men especially enjoy the dining room feature of the society and gather every noon for good food, conversation and cards. All committee meetings are held at the headquarters over the luncheon table. The cafe certainly helps good fellowship and esprit de corps.

A program of service, in conjunction with some social features, is necessary for a county medical society if it hopes to achieve that place in the sun which brings tangible benefits to its individual members.

#### WELFARE PROGRAM

Physicians frequently learn of the illness of a medical confrere. They think of it momentarily and then forget it in the stress of making a call or getting to the office on time. Such a matter deserves more attention: for example, the mailing of a sick card, a daily telephone call for reports, a visit from a member of the welfare committee, and the insertion of the sick man's name in the Bulletin would not be amiss. When one person is responsible for the fulfillment of a courtesy program, it is carried out with infinite pains. It makes lasting friends for the Society.

Last week, a certain doctor (like thousands of other poor mortals) was making out his income tax report. He called his medical society office. Could he, he asked, take as a deduction the legal expense incurred in fighting a malpractice suit which had been inflicted upon him during the past year. He was made very happy in the knowledge that this was an allowable deduction and he took down the exact citation in order that there would be no question concerning his report when it reached the income tax office. This was another small item of service rendered by one charged with certain responsibilities of courtesy resulting in greater good-will for the county medical society.

#### VALUABLE CONTACTS

To protect its own and its members' interests, and to grow in influence and prestige, a county medical society must become active in civic affairs, and contact newspapers, business leaders, welfare workers, legislators, judges and other office holders. No medical practitioner has the time to give to this important work. Yet if it is done the struggle of the individual medical man can be lessened unmeasurably. For example, your Chamber of Commerce can be persuaded to aid in and institute many activities for the good of the medical profession. The relation of the county medical society to other agencies engaged in public health work is just developing. The Public Health Committee of your Chamber of Commerce can sell preventive medicine and periodic health examinations to the public in a far more effective and disinterested manner than can the doctors in a community. The Chamber's publicity committee can effectively popularize the medical man. Its legislative committee can quietly represent the medical profession before the state legislature and otherwise guard his interests in public health measures. Moreover, the city Board of Health can be contacted so that a splendid working arrangement in various preventive medicine campaigns, such as diphtheria immunization, can be made. For example, through the splendid co-operation of the



Wayne County Medical Society and the Board of Health, Detroit doctors are receiving \$100,000 for toxin antitoxin work during the present year. The city council is glad to appropriate the money because Detroit remains a health city; the doctors are willing to do the work because it eliminates salaried competition and brings patients to their offices in follow-up cases.

Every county medical society should have accurate information regarding the resources, objectives and personnel of every agency operating in the county whose activities include the care of the sick or the prevention of disease. The acquaintance of the leaders and organizers of these various agencies should be made and assistance should be offered in developing that part of the program which has to do with the practice of medicine. The county medical society should know all facts in order to protect the public against propaganda or activities pretending to promote or protect public health and which are not in fact beneficial. The society should become so active in its public relations that the social uplifter knows and realizes that it exists. Thus he (or she) will think twice before attempting to foist on an unsuspecting public some new-fangled scheme involving medical practice. To achieve these results, and make them continuous, a medical society must have someone responsible for the work at all times—someone to see that they are carried through.

Every county society, by maintaining its integrity, being ever alert, and exercising wisdom in its decisions, can determine the character of medical practice which should prevail in that county.

The county medical society should cooperate to the fullest extent with the newspapers, supplying them with authentic articles on medical topics as well as informing them on the local medical quacks and irregulars. It is a good thing to build up a liaison with the powerful press.

#### PROPOSE RADIO ORDINANCE

The Detroit City Council was recently asked to pass legislation preventing the

use of electric vibrating equipment for x-ray machinery between the hours of 7:00 p. m. and midnight. The citizen who asked for this ordinance frankly stated: "It will apply mainly to the use of x-ray and violet ray machinery operated by doctors in their own homes located in the residential districts." The Common Council referred the matter to Councilman Hall and to the Wayne County Medical Society. The latter passed a resolution disapproving the proposed radio ordinance and dispatched its findings to the Common Council which on the very day it received the Wayne County Medical Society's letter, declined to take further action upon the ordinance. This action caused favorable comment for the Society which demonstrated that it was working in the interests of the public which must be served in sickness and accidents regardless of the time of day or night.

The Executive Office interviews personally and over the telephone approximately 60 people per day. Some are laymen with complaints against doctors. They are potential malpractice-suers. (Sewers, is right). But after a conference with the officers or executive staff of the Wayne County Medical Society, many see the wisdom of going back to their doctor, paying their bills, (and few people who *pay* their doctors ever go to court) and forgetting their belligerent ambitions. The physician in the case is always advised of the visit immediately, so that he may contact the patient before a shyster lawyer does.

#### CONCLUSION

You have heard a few of the activities of a modern county medical society which employs an executive secretary to execute them. Without a man responsible for these duties, the bulk of this work must be borne by some member of your society. A physician has not the time from his practice to give to a thorough handling of it. Some things might be glossed over and slipped. Perhaps those things of most concern to you may be in this number. In any case, admitting the doctor's full capability, and usually he is very capable (or he would not have been

chosen for office by his confreres), it is not just to saddle detail work of this kind on his shoulders. More than that, it will mean a failure to progress along the modern lines of education, service and welfare which you all desire. It becomes absolutely necessary to entrust such matters to one who can give to them his whole time and undivided attention. Let the policy of the organization be dictated by the officers; the details of its execution can be handled by a full-time man. Such a manager is styled an Executive Secretary. He is your public relations man, your advertising, and your selling agent, he is your buffer against the public, interviewing each year the hundreds of collectors, insurance men, salesmen, service men and others who otherwise would take your more valuable time. He is always endeavoring to save your time and money, trying to increase the influence of organized medicine and through unified action and service relieve the burden of the individual doctor. I have been told that the county medical societies throughout the country which have decided upon a modern program and have employed an executive secretary to insure its accomplishment seem to be outstanding. They tell me the program has been important to all in its relation to the actual scientific practice of medicine. Therefore, I may venture the prediction that every society of prominence will sponsor such a program and have an executive secretary in the very near future. The investment will pay rich returns, economically and professionally.

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#### **Mastoiditis of the *Streptococcus Mucosus Capsulatus*—With Report of a Case**

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It is the general consensus of opinion among otologists that the streptococcus mucosus capsulatus is the most destructive and insidious organism encountered in their field, because of its ability to cause a rapid general involvement of the mastoid bone, in its acute stage, in some cases, while in others it lies dormant over a protracted period of time,

and it is this latent period that is feared most, because an acute exacerbation of the dormant process may occur at any time causing an unlooked for fatal complication. Owing chiefly to this latter tendency, this group of mastoid infections form a distinct entity and as such are confused with the so-called "primary mastoiditis" group. Much attention has been given this class of infections since the exhaustive work of Gahn in 1909 and that it is a distinct clinical and pathological entity is no longer disputed.

Bacon<sup>1</sup> reported fifteen cases in 1916 and from these drew some interesting conclusions in regard to his procedure of treatment. He found that the pain may either be very severe or slight with very little fever; tenderness over the mastoid may be marked or absent where the cortex is thick; discharge may be profuse or slight with or without sagging of the posterior superior canal wall; that x-ray was the most valuable aid; that to operate is to err on the safe side since few cases yield to treatment.

Loughran<sup>2</sup> calls attention to this type of mastoiditis because of the rapid general involvement of the entire bony structure of the mastoid in some cases while in others there is the development of a dangerous and insidious latent period. His article deals chiefly with the morphology of the infective agent and concludes with a report of three cases. He makes a plea for early and frequent bacteriological examinations of the discharge in all cases of suppurative otitis media.

Alden<sup>3</sup> reported four cases in 1929 and drew attention to several interesting points. The mastoid cells are the site of most of the infection, hence the course of the otitis media is short and usually the symptoms are slight. The mastoid infection becomes walled off and a painless and often feverless destructive process takes place, during which stage there are no symptoms and so the patient does not consult an otologist until complications have set in. Alden also finds that the symptoms of the otitis media are often forgotten by the time the patient is faced by the symptoms of the complication and so the otologist has to ques-



tion them thoroughly. He notes that at this time the drum is often intact, gray, and without bulge. In all four of his cases, *streptococcus mucosus capsulatus* were found in pure cultures.

The following is a report of a case seen at the Bell Memorial Hospital:

An adult male, came to the dispensary complaining of deafness in the right ear. He gave the following history: His deafness began with an acute head-cold nine weeks previous to the date of examination. At the onset his hearing was impaired in both ears.

Three weeks after the onset of the cold he developed an earache in the right ear which perforated spontaneously and discharged for three weeks. The discharge ceased and the ear has remained dry. There had been no discharge for three weeks but he still complained of impaired hearing and pain in the right ear, mastoid, and occipital regions. The pain was dull during the day but became much worse at night. He reported some swelling behind the ear during these attacks of pain. He had not had any fever that he knew of. There was no history of previous ear trouble but he was subject to frequent severe head-colds.

Examination on April 14 revealed the following: Ears: Left M. T. slightly retracted. Right M. T. was normal in appearance except for a slight retraction, thickening, obliteration of the short process, and the scarring from the recent perforation. No mastoid tenderness or swelling. A small furuncle partially occluded the external auditory canal. The hearing tests showed a slight decrease in air conduction, an increase in bone conduction, and a positive Rinne, Weber to the right. Nose: essentially negative. Tonsils: medium size, fibrous, infected. Pharynx: granular. Larynx: negative. Temperature normal. Summary: External otitis circumscripta. Advised to have mastoid ray on account of night pain, and return for observation.

On April 21 he returned with essentially the same complaints, although on examination his external otitis had cleared up completely. The mastoid rays were reported: "Bilateral chronic mastoiditis of the sclerotic type, with slight

clouding of the tip cells and the cells anterior to the lateral sinus on the right."

On May 12 he was seen again, at which time he reported no change in his symptoms, excepting for an increase in the night pain and further intermittent swellings in the mastoid region. Examination again revealed nothing new. The ear and mastoid findings were negative. On account of the night pain, loss of hearing, and the history of edema of the mastoid area, he was admitted to the hospital with a diagnosis of mastoiditis of the *streptococcus mucosus capsulatus* type. On the second day in the hospital his temperature began to be of the picket fence type. A blood count showed between 11,000 and 12,000 white cells. A re-ray of the mastoid showed an increased cloudiness of the tip cells, but only by comparison with the initial x-ray. A very slight edema over the mastoid antrum was palpable on the day before the scheduled operation.

A simple mastoidectomy was done in the usual manner. There was a considerable quantity of free pus encountered in the tip of the mastoid with coalescence of all the tip cells. Marked sclerosis or osteitis was found around the antrum. The sinus plate was eroded up to the knee of the sinus and the sinus wall was covered with granulations. There was no evidence of thrombosis found. Convalescence was rapid. The extensive phlebitis easily accounted for the symptoms.

#### COMMENTS

This patient was first observed during the latent period of the mastoid infection when the absence of aural discharge precluded bacteriological examination which we consider to be an important diagnostic aid. Culture of an aural discharge early in the course of the otitis media with subsequent identification of the offending organism will lead to early diagnosis. *Streptococcus mucosus capsulatus* when stained with a fresh preparation of thionine is easily identified.

A comparison of the two roentgenograms proved to be of inestimable value since the second film showed a more marked destruction of the bony structure of the mastoid anterior to the lateral

sinus. This coincides with the conclusion drawn by Bacon that repeated *x*-rays are the most valuable aid in the diagnosis of latent mastoiditis of this type.

That this type of mastoid infection is sometimes confused with primary mastoiditis is easily understood since there is usually a lack of initial symptoms, no very severe earache, seldom a profuse discharge or high fever and so these patients do not consult an otologist until the onset of symptoms produced by a complication. Complications are rarely produced during the first three weeks and with a fairly long latent period the mild symptoms of the otitis media are often forgotten. If seen during this latent period, deafness and a feeling of fullness in the head are sufficient to warrant operation rather than to wait for the complications to occur.

In our case the mild symptoms of the latent mastoiditis were completely obscured by the presence of the furunculosis of the external auditory canal and the diagnosis could only be made on the basis of the night pain which was a symptom of a complication. To paraphrase this it might be said that a complication, that is, the external otitis circumscripta, obscured the earliest signs and symptoms of the complication of the streptococcus mucosus capsulatus mastoiditis.

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—R—

#### Letter From a Kansas Doctor to His Son

JOHN A. DILLON, M.D., Larned

My dear Son:

Glad to hear you are back again at your work after your vacation. I note that you seemed rather disappointed at the amount of money you had saved from your summer's work. As I recall when you came home in June you were quite keyed up over the prospect of a job with the idea in mind of helping out on your college expenses. I was ready and willing to co-operate with you along this line but was just a trifle skeptical

as to the outcome. There were no great bursts of extravagance on your part that I could see although at the time I felt you could have gotten along without the new set of golf clubs. The automatic revolver that cost you \$20.00 could hardly be classed as a necessity either, but you seemed to get quite a thrill at shooting at a little inoffensive spot on a piece of paper so I said nothing. These guns would be all right if they came endowed. It makes me smile to see some poor devil get five gallons of gasoline charged, drive out to the traps and shoot away \$2.50 worth of shells. All he has to show for his day's work is a black and blue shoulder and a righteously disgruntled wife. But I have wandered from the budget. As I recall you had about \$5.00 to turn into the treasury for your summer's work. Incidentally your mother was quite concerned as to where you spent a great deal of your leisure time. This question has been cleared up in our minds since you left as the bills are coming in. I mentioned it to some of your creditors that possible they could get in touch with you through the Dean or head of the "Why Slamma Pie," your fraternity as I recall it. On second thought I paid up and grinned as usual. I expect to get more or less vicarious (look this up) pleasure as you pursue your work.

Your younger brother, he of legal aspirations, ended the season disastrously from a financial standpoint. In fact he could take bankruptcy without doing any damage to his creditors. We invoiced his assets the other day and find outside of a tennis racket they consisted of some highly aesthetic shirts, fancy pajamas, and a monogrammed cigaret case. So confidentially, between you and me, he is not going to be able to help us out much on the budget. I might go even further and say that he will definitely take his place in the rank of the consumers as soon as his college work opens. But in his case I am encouraged as every day he shows more and more the earmarks of the embryo lawyer. He pleads his case logically and his mother usually proves to be a lenient judge. The father is overruled on all sides. But we were speaking of the budget. This year



we will start our economy plan by interdicting the check book at your end of the line. In fact I have found that three or four people working on one bank account are liable to get things all mixed up and a substantial balance will develop over night into an overdraft. Another reason for this edict and one that appeals to your mother: I knew a young man who developed a gluteal irritation simulating Herpes Zoster from carrying a sweaty check book in his hip pocket. Of course the danger of this is comparatively small but I think it best to take no chances. I would be humiliated to tell you just the allowance I received when I was at college. Suffice to say that after

I paid my landlady \$3.50 and my pool bill of \$0.35, two necessary expenditures, I found myself temporarily possessed of \$1.15. I understand this amount would hardly finance the most impecunious freshman up to lunch time of the first day.

With love,

DAD.

P. S. Will discuss the auto question with you later.

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### TUBERCULOSIS ABSTRACTS

Collapse therapy in tuberculosis is now an established procedure of unquestioned value. Clive Riviere said: "No more hopeful ray of sunshine has ever come to illumine the dark kingdoms of disease" than artificial pneumothorax. This therapeutic procedure, however, has its limitations. Mechanical difficulties brought on by the pathological condition of the lung often make collapse by the insufflation of air or gas impossible or ineffective. Lately, the injection of oil into the pleural cavity for certain cases has found favor, especially among French phthisiologists. Somewhat timidly, oleothorax is being introduced and practiced in this country. From an article by L. E. Oppengame in the *American Review of Tuberculosis*, June, 1931, the following abstracts are derived.

#### OLEOTHORAX

Oleothorax is the injection of mineral or vegetable oil into the pleural cavity. The indications for its use are: to avoid adhesions, to produce a more effective

collapse when pneumothorax is ineffective, to give more rigidity to the pleura if a bulging of the mediastinum occurs, to close a perforation of the lung, to change an empyema into a sterile disinfectant oil. In rare cases, it may be used instead of artificial pneumothorax when for any reason a patient cannot return for routine refills.

According to Fontaine's statistics, about 70 per cent of pneumothorax treatments are complicated by pleurisies, 22 per cent result in empyema, and 15 per cent make further collapse therapy impossible because of resulting adhesions. The reason pneumothorax continues to be used in the face of these troublesome sequelae is because not all pleurisies are intoxicating for patients and a great number are beneficial for pulmonary tuberculosis. In fact, by some specialists, the development of pleural effusion is regarded as a natural healing phenomenon. There is evidence to show that pleural fluid has a deterrent influence on the development and the virulence of the tubercle bacillus. But certainly not all pleurisies are benign. Demarest has classified pleurisies into the following groups:

*Tolerated Pleurisies* with little, torpid, precocious effusion produced by trauma or resulting from irritation of the pleural membranes from air insufflation. In these cases, there is no fever or pain, and reabsorption sometimes occurs by itself.

*Acute Febrile Effusions (serofibrinous)* which may appear any time during pneumothorax treatment but frequently between the third and fifth month. Effusions are profuse, there are chills, fever, a stitch in the affected side, dyspnea, irregularity of pulse, increased expectoration, and cough. The condition passes through phases but may persist for months. It is mostly benign, often regresses, and usually disappears when air refills are discontinued, but may subsequently cause adhesions. Empyema may, however, develop from it.

For these two forms of pleurisy, it is often better, after the acute stage is over, to aspirate the fluid and refill with air.

*Malignant Pleurisies*, or purulent, chronic effusions with high and prolonged fever, and causing malnutrition,

may develop from the above mentioned forms. The difference is not easily recognized at once; only the evolution of the disease enables one to make the differentiation. Such malignant pleurisies result in complete prostration or amyloid degeneration and usually end fatally.

With rare exceptions, there is no use for oleothorax in benign pleurisies, but in malignant cases, the first step in any intervention should be an oleothorax. Even if the operation is unsuccessful, the patient is improved and thereby placed in a more favorable condition for further surgical interference, such as rib resection or thoracoplasty. For an empyema complicating an artificial pneumothorax (which means pleurisy with tuberculous lesions), oleothorax is the only choice as thoracotomy is almost always fatal. Thoracoplasty done for tuberculous pleurisies in general leaves a persistent fistula; oleothorax, if properly done, is entirely harmless. For secondarily infected pleurisies (streptococcic, pneumococcic), drainage and not oleothorax is the proper treatment.

#### OLEOTHORAX FOR LUNG PERFORATIONS

The use of oleothorax for lung perforations is very limited. A small perforation as the result of the breaking of adhesions or a rupture into the pleural cavity of a small, subcortical vomica not connected with a bronchus, justifies an oleothorax. Unfortunately, not very often are we able to differentiate the small, benign perforation from a large, fatal one. (The author describes differential signs.)

Temporary perforations do not need an oleothorax. Valvular perforations, not helped by deflation, are benefited by oleothorax. Large perforations are mostly fatal, but if unilateral and recognized at once, thoracoplasty is a help. Bernard and Roussel, however, injected oil in such cases, thereby disinfecting the pleura and placing the patient in better condition for a final thoracoplasty.

#### USE IN ADHESIONS

With oleothorax, adhesions may be avoided or prevented, though not all adhesions need an immediate oleothorax. (The beginning of adhesions can be foreseen by manometric readings and fluoroscopy.) In unsuccessful pneumothorax,

for instance, in partial pneumothorax when only one part is collapsed far from a cavitation which remains open, air insufflations are not only useless but also dangerous because of the necessary high pressure.

#### OTHER INDICATIONS

Mediastinal hernia or bulging produced by low pressure on the opposite side of a pneumothorax may be reduced by oleothorax. Finally, in exceptional cases, if patients are not able to stay in the hospital or to return for refills, a pneumothorax may be changed into an oleothorax, which requires refills only about every two months.

#### TECHNIQUE AND RESULTS

Accidents have occurred from the injection of badly or anciently prepared, not-neutralized vegetable oil. But if all precautions are taken in its preparation, there is no great difference in the choice of the kind of oil used. The power of reabsorption depends more on the individual than on the kind of oil. The vegetable oil is milder for the pleura and not so irritant as mineral oil. The author uses mineral oil when he wishes to avoid thickening of the pleura and to produce more compression, while the vegetable oil is used mostly in empyemata.

For the last few years, he has treated many patients with oleothorax and has not had one death directly from the operation. Reported cases of death are probably due to neglect of the pressure which oil produces—a most important factor.

Of the four case histories cited by the author, the following is quoted:

Case 2: Miss A. B., age 21, admitted July 29, 1929. Diagnosis: Chronic pulmonary tuberculosis. *x-Ray Report*: Bronchopneumonic type of pulmonary tuberculosis, mainly unilateral. Left Lung: Diffuse involvement of entire lung with multiple cavities in upper lobe. Right Lung: Negative, except for some hazy appearance at apex and increased size of hilar lymph nodes (?); lower bronchial roots somewhat prominent.

January 30, 1930: Initial pneumothorax 400 cc., 4,-1. February 20, 1930: After several refills, re-examination of the chest shows left-sided hydro-pneumothorax, with fluid level up to third in-



terspace and displacement of mediastinum and trachea to the right. In the region of the left upper lobe is seen some lung tissue, with well defined and sharply demarcated areas of lessened density which are undoubtedly uncollapsed vomicae held by adhesions to the chest-wall.

February 24, 1930: Lemon-colored fluid aspirated from left chest (500 cc.); 30 cc. of oil-gomenol injected; normal reaction. Patient had in four-to six-day intervals several injections until complete blockage was obtained by June 30, 1930. Since the last injection, we control the amount of oil once every four weeks. The reabsorption of oil in this case since a blockage was obtained was very slow, and we injected only 5 to 10 cc. of oil once a month.

This case is particularly interesting. Why did we change an acute febrile effusion into an oleothorax and what effect was obtained by an oleothorax? Because in spite of the effusion, the cavitations in the upper lobe were open on account of adhesions and because a menacing mediastinal hernia (bulging) occurred which interfered with the further pneumothorax insufflation. After 2-3 months of oil treatments, we obtained a rigidity of the mediastinal pleura, the hernia disappeared, and we were able to inject a considerable amount of oil without fear of rupture. In the meantime, the patient developed after a pneumonia a right-sided pulmonary lesion. We feared to perform a right-sided pneumothorax on account of the left-sided oleothorax, and decided to inject sanocrysin intravenously. The patient is now in a very good condition.—*Oleothorax, L. E. Oppengame, Amer. Rev. of Tuberc., June 1931.*

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#### **Appraisal of Present Treatment of Diabetes**

According to Elliot P. Joslin, Boston (J.A.M.A., Aug. 29, 1931), the present treatment of diabetes is better than is often thought, and, therefore, one should be slow to depart from standard methods. The average patient who consulted him in January, 1931, had already lived half again as long (6.1 years) as his confrere of January, 1922. Indeed, judged by the duration of his disease the aver-

age diabetic patient in January, 1931, would have been dead in the January prior to the discovery of insulin, because at that time the total span of life of the diabetic patient did not exceed six years. Furthermore, this January's diabetic patient was older by eight years, his average age being 50 years instead of 42. The proportion of males had decreased to 44 per cent in contrast to 47 per cent in 1921 and 55 per cent a decade before, again illustrating the remarkable change that has taken place in diabetic sex distribution. The first year of diabetes is now the safest for the patient, whereas formerly it was the most serious. First year mortality cannot drop much lower than the 4 per cent it has now reached, because so many cases are encountered in the aged. Today every physician realizes that coma is an accident or the result of neglect, and, although arterio-sclerosis has largely taken its place in diabetic mortality, diabetic gangrene, which is its most common expression, occurs almost exclusively in the ignorant and indigent, so effective has been prophylaxis. A growing percentage of diabetic patients now outlive their life expectancy and a leading insurance company acknowledges that, since the discovery of insulin, diabetic mortality has decreased in the young and that its rise in the old is largely to be explained not by an increase in the disease but rather because of an increase in the total number of known diabetic patients. Soon, even if not today, one can say to the patient developing diabetes in 1931 that the chances are certainly 1 in 10 and perhaps 1 in 5 of his living longer with diabetes than will his average neighbor of the same age without it. Since the average duration of diabetes in the average living patient is now so much greater than that in the recently fatal case, the problems of treatment are new problems and must be recognized as such and met with an open mind. An unexplored diabetic land lures one on. With the wide divergence in types of treatment now in vogue, physicians and patients can easily become hopelessly confused unless fundamentals are emphasized by all.

# THE JOURNAL

of the

## Kansas Medical Society

W. E. McVEY, M. D. - - - Editor

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### THE OUTLOOK FOR MEDICINE

The general depression has added somewhat to the unrest, the prevailing dissatisfaction with things as they are, in the medical profession. Prophecies as to the future and suggested plans for the present are subjects for numerous dissertations. Some support is readily obtained for most any scheme which offers a possible solution of some of the most pressing problems. While this one and that one and a few others are trying to devise some new and unique plan of procedure by which the inevitable may be prevented or postponed, the steady encroachment of state medicine or its congeners is helplessly and hopelessly accepted as a fact.

Wise men in and out of the profession discuss the high cost of sickness and by various arguments attempt to shift the responsibility from one shoulder to another, because it is upon this theme that arguments for state medicine are builded. It is easy to explain and the evidence justifies the explanation, that the services of physicians and surgeons occasion less than thirty per cent of the total cost of sickness. However, the medical profession cannot thus entirely shift

its responsibility for the expense of laboratory tests, roentgenologic examinations and hospitalization. In fact, until the beginning of this agitation about the high cost of medical care, the medical profession had reason to be, and did feel proud of the fact that it was rendering the best possible service to sick people, that it was using every available means for accurate diagnosis and was assuring them of better care at the hospital than was possible in the home. If during the years of prosperity the people came to appreciate these things, in fact came to demand them with a little more of this or that expensive type of service added, it was because they believed, as they still do, that their sick and injured should have the best care possible, not because the attending physicians always prescribed it.

The people can get just as cheap medical care for their sick as they ever could. They can keep them at home, have them nursed by relatives and friends and in the majority of cases can depend on the bedside diagnosis of their physician. They can also heat one room in the house with a wood or coal stove and leave the other rooms cold; they can heat water in the teakettle for an occasional bath in the washtub; they can go back to the horse and buggy or walk; they can save a lot of money by fattening a few hogs in the back yard and butchering them for the winter meat. Why pick on the care of the sick ones for retrenchment.

A program of retrenchment involving the modern comforts of life would not appeal to many people, nor was this agitation about the cost of medical care initiated by the people who were getting the service. They were getting what they wanted and what they paid for, when and if it was convenient, and they still do.



We are all paying too much for the comforts of modern life, frequently called luxuries. We pay too much rent, too much to keep the automobile in running order, too much in taxes for which we apparently receive little or nothing in return; too much for building highways that are never completed; too much for everything when the income fails to meet the demands on it. But there are no large committees appointed and no great funds subscribed or donated to find out what becomes of the money collected for highway construction. No committees have been appointed or large sums of money appropriated to make a survey to determine the average cost per family for automobiles and their maintenance, and yet this item is far in excess of the cost of medical care.

All of these things are already commercialized and occupy their proper place in the world of magnificent finance.

The care of the sick is practically the only important necessity that is not controlled by some sort of organized monopoly. Its commercial possibilities are enormous and the only thing standing in the way of their realization is a lack of information which will soon be available. One's imagination must be severely taxed to see any altruistic or philanthropic motives in this much discussed and much advertised and very expensive survey of the cost of medical care.

The key stone in any insurance structure for the care of sick people is of course cheap and efficient medical service. There is nothing in the history of the medical profession to indicate that financial reward has ever been an important consideration in the service they have rendered to those requiring it.

The history of so-called industrial medicine shows plainly that medical

service can be purchased at wholesale at prices that permit it to be retailed to the people at a mere fraction of the prices they would have to pay independent physicians.

The history of sickness insurance in Europe proves that whatever concessions are made in the cost for the care of the sick and injured, it is always the medical profession that makes them.

Of the many explanations as to why the medical profession should bear this burden there are but two that deserve consideration: The medical profession is willing to accept the burden, and it is not in position to prevent its imposition anyway.

Organized medicine really does not exist. Our local and state medical societies, which were founded and are maintained as scientific and educational bodies, have been federated into a great national association, which was also founded and is maintained as an educational and scientific body. It is a great association and has accomplished the almost impossible in the advancement of scientific medicine. But efforts to initiate any activity for the economic welfare of the profession have failed and no doubt will continue to fail. It is doubtful if an organization founded for educational and scientific purposes should, even if it could, attempt to adapt itself to the purposes of a trades union.

It has been but a few years since skilled laborers of all kinds were at the mercy of the corporations that employed them. Long hours and wages that were barely sufficient to sustain them was the rule. The trades unions have not only succeeded in enforcing their demands for shorter hours and better wages, but they have been able to maintain both the working hours and the wage scale in spite of the general depression and unemployment.

If it seemed advisable to unionize medicine upon any of the plans adopted by skilled labor groups, it could not be brought about through or in connection with our present organizations. It is very doubtful if the medical profession, or a sufficiently large part of it, has yet reached a state of mind that would tolerate the conditions upon which these unions are conducted.

After some form of state medicine has become an established fact this mental attitude may change, but even then it is doubtful if the long boasted fraternalism in the medical profession is of a sufficiently cohesive form to make any sort of an efficient protective association possible.

State medicine is with us now, in certain forms and in many sections of this and other states.

Public Health groups and various lay organizations are doing what the medical profession through its county societies could have done and could do now if so inclined. All of the immunization campaigns that are initiated by Public Health authorities can be conducted by county societies, as they have been by several counties in this state. In some of the counties where the county societies have taken an interest in the work, the county commissioners have paid for it at the rate of one dollar per person immunized, the State supplying the materials free.

There has never been a good reason and there is no reason now why the county societies should not take over the responsibility for all of the free clinics and for all kinds of immunization campaigns, except that they are indifferent to the matter. The work must be done, it is the duty of the health authorities to see that it is done, and if the local profession won't do it, then it must of

course be done by men from the Health Department.

In the Public Health Reports, August 28, there appeared an address delivered by A. J. McLaughlin, Medical Director U.S.P.H.S. at the annual meeting of the Illinois State Medical Society. A very comprehensive analysis of the past and present relations between the medical profession and the health department was embodied in this address. There are several sections that seem particularly appropriate to this discussion and we have taken the liberty of quoting them here. Particular attention is called to the last part of the quotation, in which is offered a plan for county organizations that should meet with approval.

“Forty years of evolution and development in public health work has brought public health administrators to the point where at last they know what ought to be done and the best way to do it. In those 40 years, and especially in the period since 1900, they have established both fixed and traveling clinics and have conducted wholesale immunization campaigns and wholesale examinations for the discovery of defects in school children—all of which is work that should be done by the practicing physician and by the medical society as a collective unit. The only excuse for invasion of the physician's territory was that the physician individually and collectively would not do these things that were urgently necessary if we were to accomplish anything in preventive medicine. No health officer could sit idly by while children died, incipient tuberculosis became advanced tuberculosis, and venereal disease ran rampant, when aggressive action, even if wrong in principle as an invasion of the private physician's field, could prevent this unnecessary loss of life.”

“We speak of the organized medical profession, but its organization is little more than provision for periodic meetings for the reading and discussion of



papers on scientific subjects. An exaggerated sense of ethics makes many physicians shrink from anything like business organization; yet organization on a business basis, provision of clinic facilities, regulation of fees on a sliding scale basis according to income are essential if State medicine is to be prevented. There are notable exceptions, for instance, the medical society of Kings County (Brooklyn), the New York Academy of Medicine, and the Wayne County (Detroit) Medical Society have taken steps toward business organization with a view toward social service; but, except these and a few others in large cities, county medical societies are unorganized except for periodic meetings for the presentation and discussion of scientific papers. The business side of their real obligation, to establish facilities for the best preventive medical and surgical advice and treatment at a price that each citizen can afford, is entirely neglected."

"It is not sufficient to have all facilities for the best preventive medical and surgical diagnosis, advice, and treatment available in the large city or medical centers of a State. The citizens living in small cities, in towns, or rural areas are, in common justice, entitled to the use of such facilities quite as much as the wealthy or the poor living in the large city or medical center. The county medical society should establish or cause to be established in the county seat and, in populous counties, in other small cities out-patient clinics completely equipped for early diagnosis and treatment. They should fix the fees on a sliding scale according to income—for example, dividing the clientele into three or more classes, as follows:

- (1) The indigent to be paid for by the county at a fixed rate.
- (2) Those earning less than \$1,500 per annum to pay a minimum.
- (3) Those earning from \$1,600 to \$2,400 per annum to pay a higher fee.
- (4) Those earning over \$2,400 per annum to pay full fees.

The fees for house or office visits should be determined for these same

classes. The facilities for diagnosis or treatment of the out-patient clinic or hospital should be available for all members of the medical society and the fees collected divided *pro rata*."

The remedy Dr. McLaughlin proposes, in the last section quoted above, has many features that should recommend it at least to the small county societies. In fact, a plan very similar to this was adopted by several of our county societies some years ago and seemed to work very satisfactorily. Whether still in operation we are unable to say at this time.

There are a good many small cities in Kansas and no very large ones, so that the plan should be applicable to all of the counties in the eastern half of the state at least. In the sparsely settled western counties a few such organizations might be successfully conducted.

The essential equipment for diagnostic clinics of this type would include an *x-ray* machine and a fairly well equipped laboratory. This implies that some one of the members should be trained in roentgenology or that a roentgenologist should be employed. It also implies the employment of a laboratory technician, for it is unlikely that one of the members would care to devote the time necessary for that end of the work.

From such information as is available it would appear that there are few counties in the eastern half of the state that do not have fairly adequate facilities for diagnostic work of the kind proposed, at some place convenient to the physicians in all parts of the county. In the other counties the physicians find such facilities in adjacent counties at convenient points.

In some of the counties the equipment is owned by county or municipal hospitals which are controlled by county societies or their members. Under these circumstances it would probably not be

difficult to arrange for out-patient clinics at these hospitals on terms similar to those suggested. In other counties the equipment is privately owned, installed in a hospital or in the owner's office. In cases of this kind no doubt some plan could be worked out whereby the county society could reimburse the owner for his services as well as the use of his equipment.

The question of ethics involved in the suggested division of fees would probably require little if any consideration. A more serious question would probably arise in determining how the deficit should be taken care of.

On the whole the plan seems to be feasible. There are numerous obstacles of course, but none of them really insurmountable. A careful survey of the conditions now existing would no doubt greatly facilitate the formulation of some practical plan of procedure.

#### FALL CLINICS

The physicians in this section of the country are being given some splendid opportunities to hear what the teachers and the acknowledged leaders in the various departments of medical science have to tell them, to get the latest and best from the most reliable sources. Those who attended the annual fall clinics at Kansas City were certainly more than repaid for the time and money spent.

The fact that so many go to these clinics year after year is sufficient evidence of their worth to the profession. It is a strenuous undertaking to listen to all of the lectures and to see all of the clinics, but it is surprising how much practical information one can acquire during the few days he is there.

There are a good many who were unable to attend the clinics at Kansas City this year, and there are a good many

who did attend that would like some more of the same kind of instruction. We want to call attention to the fact that the Oklahoma City Clinical Society is holding a four day clinic from November 2 to November 6. We would like to suggest that you consult the program prepared, which you will find in the advertising pages. You will see there a great many names you are familiar with, names of men you would like very much to listen to.

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#### PRESIDENT'S LETTER

To Presidents and Secretaries, County Medical Societies.

Arrangements have been made to put each member of our Society on the "Folks" mailing list. With the co-operation of our members this little magazine will go over big with the laity; in fact, Dr. McVey has abundant evidence that the laymen do approve and will support it if the members of our Society will do their part.

Won't you send in names of some of your unemployed who would make good agents for getting subscriptions? They will be helping circulation and incidentally will be helping themselves financially.

I want to call your attention to the resolution adopted by the A.M.A. at Philadelphia in June regarding hospitalization of veterans for non-service-connected disabilities. This resolution appears in the August number of our State Journal, page 266.

I hereby appoint each County Society President a committee of one to see that this resolution is explained to the Legion and Veterans of Foreign Wars posts in your county. This resolution seems to be misunderstood generally by ex-service men.

It is really to their interest if they would take all facts into consideration. A plan could be developed whereby the ex-service man could be paid in cash, enough to enable him to go to any civilian physician or hospital and he would be a free man and not a small speck in a vast machine.



I have found ex-service men when talked to individually, have really approved of the AMA plan, and I believe when they are acquainted with our motive, will be for it.

We have several committees doing excellent work for the citizens of the State as well as for our own society. Reports of their activities will reach you later.

The time has now arrived for each County Society to initiate a plan for medical service to the unemployed and to those of small income, as well as to the pauper, and still leave these groups with their self-respect intact. Organized Medicine in each county should take the bull by the horns and come out with something definite along the lines just mentioned. If we don't some non-medical organization will take the dice away from us and we will lose the play.

I have a tentative plan for this county; it isn't perfect; it will need revising; it may work poorly; it may not work at all; but it is a start and if you wish to know what it is, write me.

E. C. DUNCAN.

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**CHIPS**

The rarity of the occurrence of endocarditis in children under five years of age has long been recognized, although a high per cent of valvular lesions were noted during the first ten years of life. Vecchi, of Florence, Italy, has published in the July number of the *Archives of Pathology* an article in which he calls attention to the necessity for microscopic examination of the valve structure in autopsy material. He found in many cases that valves which were microscopically normal, when carefully sectioned and examined under the microscope showed unmistakable evidences of inflammatory processes. From these studies he concludes that inflammatory processes of marked intensity often take place in young children but, on account of the fact that thrombosis fails to appear, the microscopic diagnosis at autopsy is impossible. He calls attention to the fact that it is the healing process that is of special interest. Superficial lesions, those confined to the endothelial and subendothelial layers, might heal

quickly and completely, but deeper changes of focal necrosis and lymphocytic and histiocytic infiltration could not disappear without leaving some trace. When the general inflammatory process has come to an end healing can take place only by proliferation and substitution of connective tissue, with consequent deformity of the margins of the valves which depends upon the severity of the primary lesions. When the deeper parts have been involved in the inflammatory process marked changes must result. These findings seem to explain the frequency of valvular lesions during the first decade of life with the apparent infrequency of endocarditis prior to the fifth year.

Chaulmoogra oil may be an efficient remedy in the treatment of chronic arthritis. McIlhenny reports a series of cases treated with chaulmoogra oil in the September number of the *New Orleans Medical and Surgical Journal*. While a consultant on the staff at the National Leprasarium he observed the absence of secondary infectious arthritis in cases of leprosy. He concluded this was due to the treatment with chaulmoogra oil and began its use in the treatment of cases of arthritis. At the time of his report, thirty-nine cases had been discharged from the hospital and nine cases were still under treatment. Only cases of the atrophic, hypertrophic and mixed forms were treated. Every patient showed improvement, many complete relief of symptoms and restoration of function, and others arrestment of the disease and reduction of deformity. No patient has been admitted to the hospital with a return of the condition. The crude oil is used, made up after the Johansen formula, consisting of benzocaine 0.2 gm., olive oil 10 cc., crude chaulmoogra oil (P. D. & Co.) 90 cc. Five cc. are injected into the deltoid and 8 cc. into the buttock, alternately. Injections are given bi-weekly. The oil, preferably in enteric capsules of 1.6 cc. each, is also given by mouth three times a day. Improvement is usually apparent during the second week. The report by Dr. McIlhenny was confirmed by others asso-

ciated with him in the treatment of some of these cases.

Taking advantage of the fact that hyperplastic changes in the thyroid gland may be produced experimentally and that an artificial involution may be caused by the use of iodine or a natural involution may follow the withdrawal of the stimulus, Womack and Cole conducted some experiments of this kind in order to observe the nature of the changes that occurred in the gland. A report of their work appears in the September number of the *Archives of Surgery*, and in the summary of their observations emphasize the following points: "Increase in the functional activity of the thyroid gland is extremely common and is dependent on a number of factors. This increase in function is usually associated with definite morphologic changes that may occur to an extreme degree. If the stimulus is great enough, these changes may take place in a few hours. A more or less mild stimulation of the thyroid gland over a relatively long period of time may produce hyperplastic changes similar to those seen in exophthalmic goiter. Following involution brought about by the disappearance of the stimulus causing the increase in function, or by artificial involution due to the administration of iodine, replacement of fibrous tissue occurs. Repetition of this physiologic cycle may produce a nodular goiter similar to the so-called adenoma. The occurrence and location of these nodules is apparently dependent on the amount and location of the fibrosis."

Pulmonary syphilis is an accepted fact, but in spite of the prevalence of syphilis comparatively few cases of pulmonary involvement by this disease are found at autopsy. No doubt a good many more could be found by careful study since there are fairly definite points of difference between this and other lesions. The differential diagnosis during life, however, seems to depend very much upon the finding of spirochetes in the sputum and these are rarely looked for. The symptoms and physical signs are not diagnostic. McIntyre, in the Feb-

ruary number of the *Archives of Pathology*, has given a very complete summary of the literature to date and mentions some of the roentgenological appearances that may suggest a possible syphilis. The shadows due to syphilis are in the lower and middle lobes while those due to tuberculosis are in the upper lobes. The densest shadow in syphilis begins at the hilus and diminishes toward the periphery, while in tuberculosis the characteristic shadows are about the apical and subapical regions. No definite points of differentiation of pulmonary syphilis from other pulmonary conditions can be given, with the exception possibly of the radiating fan-like lines seen in the films and the location. It has been stated by Watkins that no roentgenologic differentiation can be made between pulmonary syphilis and unresolved pneumonia.

It has been but a short time since it was popularly believed that one's reputation for truth and veracity could be determined by the white spots on his finger nails. Numerous causes for these white spots have been advanced, but perhaps the most commonly accepted is the accumulation of air under the nail. However, this theory was based upon false interpretations of the observations upon which it was based, according to Singer, in the July number of the *Archives of Dermatology and Syphilology*. He claims that keratinization is due to decreased metabolism of the germinal layer. Any increase in the metabolic rate will delay this, keratohyaline granules will persist and leuconychia will result. In the process of keratinization the keratohyaline granules are transformed into eleidin and keratin which is fairly transparent and permits the visibility of the matrix below, while the keratohyaline granules so diffuse the light as to prevent this, thus giving the white spot.

Certain signs and symptoms and their response to dehydration was discussed by Dr. Temple Fay at a meeting of the Philadelphia Neurological Society last January and is reported in the *Archives of Neurology and Psychiatry* for August. It is not intended to give a synopsis of



his discussion here but to quote the following which may be of considerable interest to some of us. "It is my opinion, after studying normal persons and various types of disease processes, that the average intake in the normal adult ranges between 36 and 48 ounces of liquid per day. The intake for those persons who indulge in a large consumption of water, because of the theory that fluids are beneficial to the renal function, may range from 60 to 200 ounces per day. There is no physiologic proof at hand as yet to substantiate the theory that large quantities of fluid are beneficial to the kidneys under pathologic conditions, and there is much recent accumulative evidence to show that a rational amount of fluid, even below the normal requirements, has proved to be beneficial to the pathologic urinary conditions, especially albuminuria and tubular casts."

Some quite unusual results in the treatment of late syphilis are reported by Rajka and Radnai, of Budapest, in the August number of *Archives of Dermatology and Syphilology*. Their treatment consists of general intensive ultraviolet irradiation combined with injections of autogenous blood. Ultraviolet irradiations of the whole body with erythema doses three times a week were given for ten weeks. Half an hour after the first and last ten irradiations, blood was withdrawn and reinjected in increasing doses from 2 to 15 cc. Under this treatment the Wassermann reaction became negative in 57 per cent of the cases of latent syphilis and in 28 per cent of the cases of neurosyphilis. The clinical subjective symptoms of neurosyphilis and diseases of the aorta improved in all of the 41 cases. The improvement extended to all of the symptoms: gastric crises, vomiting, lancinating pains, ataxia, incontinence of urine, etc. The duration of the remissions was from one to nineteen months. Relapses occurred in 22 per cent of the cases. In 12 per cent no improvement followed a renewal of the treatment.

According to the text books there are many conditions that may give rise to

symptoms like those of appendicitis and occasionally pseudo-appendicitis is mentioned, but is entirely ignored by many authors. This term was used to describe a certain group of cases by F. Gregory Connell in 1916. These cases he described as occurring in young thin adults and in females. They have frequent recurring attacks of pain, which is aggravated by exercise and relieved by recumbency. During the attack there is muscle spasm, there may or may not be tenderness, the intestine is inflated with gas, there is no fever, no leucocytosis, rarely vomiting. Removal of the appendix does not cure them. In the February number of *Archives of Pathology*, Pessin, in discussing the clinical significance of argentaffin cells suggests that the condition known as pseudo-appendicitis may be explained by the migration of the glandular argentaffin cells into the nerve plexus, causing it to hypertrophy. These hypertrophied and hyperplastic nerve elements known as neuromas may produce pain and cause one to suffer from an apparently normal, non-inflamed appendix.

Goiters have been produced experimentally by Wegelin with cracker crumbs, by McGarrison with bacterial toxins, by Marine with liver and fats, by Hellwig with calcium and by Webster with cabbage. The latter reported his experiments at a meeting of the New York Pathological Society last November, *Archives of Pathology*, March, 1931. Whatever the positive agent in cabbage may be its action was controlled by the administration of iodine as was the case in Hellwig's experiments with calcium. It seems to be the opinion of a considerable number of investigators that there is some positive factor in the etiology of goiter. From the reports so far one would suspect that there are at least several such factors, and since the diet of laboratory rats is rather restricted, still other positive factors may yet be found, the action of all of them controlled by iodine. In that event the negative factor, the absence of iodine, will still hold the important place in the etiology of goiter.

## SOCIETIES

### CLAY COUNTY MEDICAL SOCIETY

The regular meeting of the Clay County Medical Society was held on the evening of the 9th of September in the sun room of the Clay Center Municipal Hospital. Eleven members and eleven visitors were in attendance.

The meeting was called to order by the president at 8:10 p. m. The minutes of the preceding meeting were read and approved.

Following a short business meeting, Dr. Eugene Hamilton and Dr. C. Edgar Virden, both of Kansas City, Mo., were introduced as the guest speakers of the evening. They presented a symposium on "Infections of the Liver and Gall Bladder." Dr. Virden covered the subject from a radiological standpoint and showed a number of *x-ray* films, demonstrating various types of gall bladder pathology. Dr. Hamilton spoke on the anatomy and physiology of the bile tract and on the etiology, pathology, symptomatology, and treatment of the various types of biliary tract infections and gave a number of surgical reports on cases, the radiological findings of which Dr. Virden had presented.

These talks were very interesting and instructive and were given in a very . It was the general opinion of the society that this was one of the best and most practical programs that had ever practical manner. The collection of cholecystograms was excellent. been presented at any of its meetings.

Drs. Hamilton and Virden were elected to honorary membership in the society.

On motion the meeting adjourned at 10:17 p. m.

F. R. CROSON, Secretary.

### SHAWNEE COUNTY SOCIETY

The Shawnee County Medical Society met at the Jayhawk Hotel, Monday evening, October 5. Dr. J. W. Kennedy of Philadelphia was the guest of the evening and addressed the members on the subject of peritonitis. It was an intensely interesting and unusually instructive talk. His conclusions were drawn from his own experience. He is

apparently not much influenced by popular theories, especially when these do not harmonize with his own observations. He gave the members a great many things to think about, particularly in regard to the high mortality in appendicitis.

There was a good attendance. The next meeting will be held at the State Hospital.

### --- R --- In Memoriam

Once more we are called upon to register the loss of another member of the ranks of the fast disappearing family physician.

Dr. W. H. Yandell was born on August 27, sixty-one years ago, at Joplin, Missouri. When he was but a child, his parents moved to Fall River, Kansas, where he grew to young manhood. He was a nephew of the late Dr. David Yandell, the distinguished surgeon of Louisville, Kentucky, and naturally his mind turned toward medicine as a vocation for life.

After his graduation from a Louisville Medical College he settled at Piedmont, a prosperous village in the southern part of Greenwood County, Kansas, where, with the exception of a short time spent at Cottonwood Falls, he resided for more than thirty years. He chose the life of the family physician and restricted his professional activities to that most important field of labor. He served the people of his community in full accordance with the time-honored ideals of the country doctor. Always ready to answer the calls of his people in the hour of illness and distress; nor dark and stormy night, nor difficult roads ever deterred him from the faithful performance of his beneficent duties to all who trusted in him for aid. He loved the people and identified himself with the activities of his community, taking his place as a leader in the affairs of the public. He was a member of the school board, and his advice was often sought.

His professional life was spent wholly in the interest of his patients and friends. His dealings with the profession were singularly free from the taints of commercialism. His untimely passing marks the disappearance of another of



the strictly family type of physician, whose ranks, alas, are too often broken without replacement.

I can conceive of no greater benefactor to man than the honest country physician who finds his way through the storms, over uncertain roads, in order to dispense his skill and wisdom at the bedside of the patient. Such was the life and such the work of our lamented confrere, Dr. Yandell.

D. W. BASHAM, M.D.

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### DEATHS

Ernest Frank Day, Arkansas City, aged 54, died August 9, at St. Francis Hospital, Wichita, of duodenal ulcer. He graduated from University Medical College, Kansas City, Mo., in 1900. He was on the Staff of Mercy Hospital. Served in the World War. Was for many years president of the board of education. Was a member of the Society.

Jeff William Hayward, Kansas City, aged 46, died August 8, of encephalitis. He graduated from the University Medical College, Kansas City, Mo., in 1909. He was formerly coroner of Wyandotte County. He was a member of the Society.

John W. King, Hillsdale, aged 72, died July 25 of senile dementia. He graduated from Eclectic Medical Institute, Cincinnati, in 1883.

Floyd W. Noble, Florence, aged 52, died July 11 of cardiorenal disease. He graduated from the University Medical College, Kansas City, Mo., in 1905. He was a member of the Society.

Marcus Arthur Newell, Leavenworth, aged 63, died July 10. He graduated from the Medical Department of Columbia College, New York, in 1890.

John G. Evans, Winfield, aged 75, died July 22 of arteriosclerosis and cerebral hemorrhage. He graduated from the Medical College of Ohio in 1881.

Thomas Blakeslee, Neodesha, aged 87, died July 11 of cerebral hemorrhage. He graduated from Rush Medical College in Chicago in 1870.

### BOOKS

Gonorrhea in the Male and Female: By Percy S. Pelouze, M.D., Associate in Urology and Assistant Genito-Urinary Surgeon at the University of Pennsylvania; Fellow of the Philadelphia College of Physicians, Philadelphia, Pa. Second Edition, Revised. 440 pages with 92 illustrations. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$5.50 net.

This is really a second edition of the book published under the title, "Gonococcal Infections of the Male." The author's purpose has been to present his subject in a lucid and attractive style and in such form that much unnecessary reading of words may be avoided. This is a very complete presentation of the subject, it is well illustrated and should meet every requirement of the general practitioner for a reference book on this subject.

The Practice of Medicine: By A. A. Stevens, A.M., M.D., Professor of Applied Therapeutics in the University of Pennsylvania; Visiting Physician to Philadelphia General and University Hospitals; Consulting Physician to St. Agnes' Hospital, Philadelphia. Third Edition, entirely reset. 1150 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1931. Cloth, \$8.00 net.

In this edition a good many sections have been entirely rewritten. Considerable material that appeared in previous editions has been omitted as being out of date. A large amount of new material has been added so that the book is now quite up to the minute.

Surgical Pathology of the Genito-Urinary Organs by Arthur E. Hertzler, M.D., Professor of Surgery, University of Kansas. Published by J. B. Lippincott Company, Philadelphia.

This is one of a series of monographs on surgical pathology being prepared by the author. In this book he has tried to avoid the complications of the specialist. He emphasizes the similarity of embryonal tumors as found in the testicle and kidney. He has presented a clinicopathological picture of the kidney infections whereby the surgeon can anticipate the outcome. He shows that a closer study of the minor changes of the prostate often enables the surgeon to find a middle ground between doing nothing and radical operation. The book is excellently illustrated.

Simple Lessons in Human Anatomy by B. G. H. Harvey, M.D., Professor of Anatomy, University of

Chicago. Published by the American Medical Association, Chicago. Price \$2.00.

This is a compilation of a series of articles on anatomy written by Dr. Harvey for Hygeia. There has been some elaboration of the original articles. There have been some additions and some new illustrations. Some of the articles have been rewritten. It should appeal to people who want to know something of the structure and functions of the body.

What the Public Should Know About Childbirth by Walker Bourne Gossett, M.D., Published by the Midwest Company, Minneapolis, Minn. Price \$2.00.

Considerable space is devoted to the chapter on early obstetrics in which the criticism of American obstetrics by Arthur Brisbane, a newspaper and magazine writer, is quoted, and in which the advantages of hospital care are stressed. The next chapter is devoted to superstitions and customs. He discusses maternal impressions, methods of anesthesia, prenatal care, ophthalmia neonatorum, frontier nursing service and moral problems in hospitals. While this book contains some valuable knowledge some of which the public should have, there is some question if the woman about to be confined will be better served if she is led to question the ability of the obstetrician she has selected. That would probably be the effect of her perusal of this book even though her attendant be fully competent.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume II, No. 4. (Mayo Clinic Number—August 1931) Octavo of 211 pages with 74 illustrations. Per clinic year, February 1931 to December 1931. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1931.

Judd, Heimdal and Anderson present a variety of unusual cases. Balfour and Howard report a number of cases of ulcer of the stomach and duodenum. New's clinic has to do with lesions of the palate, throat and neck. Myerding presents a series of cases of bone lesions. Pemberton and Mahorner also report a variety of cases. The clinic of Lillie and Williams deals mostly with the ear. Several reconstructive procedures are reported by Walters, Priestly and Gray. Learmonth and Kernohan report three

cases of epidermoid cyst of the brain. Wagener discusses the ocular changes following cervico-thoracic sympathetic ganglionectomy. These are only a few of the reports to be found in this volume of the clinics.

Living the Liver Diet by Elmer A. Miner, M.D., Published by C. V. Mosby Company, St. Louis. Price \$1.50.

The author of this little book has a personal incentive to develop some form or forms of liver diet that the patient with pernicious anemia could persistently tolerate. He has had an opportunity to test out the details of the liver diet he describes. The many preparations of liver for which he gives recipes will be gratefully welcomed by those for whom liver has been prescribed. Those who heard Dr. Miner's paper at the last annual meeting of the Society as well as those who read it in the Journal, will be glad to get a copy of this book.

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#### New and Nonofficial Remedies

There is no better way of keeping up to date on the newer remedies than to follow the work of a competent, unbiased group of scientific investigators, working altruistically in the interest of the medical profession. The Council on Pharmacy and Chemistry is such a group. New and Non-official Remedies is its list of accepted products. The book is published annually and describes accepted articles and includes facts the physician should know. It keeps physicians up to date regarding the newest remedies. It advises physicians of products not worthy of his attention. It is useful to the physician when he is importuned by the detail man to prescribe a new specialty. (J.A.M.A., Sept. 5, '31.)

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#### Silver Nitrate Ampules and Capsules

The A.M.A. Chemical Laboratory undertook an investigation of silver nitrate capsules and ampules to determine whether the market supply was satisfactory. The Laboratory found that the various brands of silver nitrate ampules contained in both wax and glass ampules showed that the strength of the silver nitrate solution is generally somewhat greater than the amount claimed and



that practically none of the silver is absorbed by the wax ampule. The quantity of solution found in the glass ampules complied with that claimed. On the other hand, in the wax ampules not only did the quantity of solution vary with each brand, but the products of the various firms differed markedly, ranging from 0.07 cc. to as high as 0.26 cc. The Laboratory points to the possible danger from fragments of glass which may form when the glass ampule is opened and which may reach the infant's eye when the silver solution is instilled. The Council on Pharmacy and Chemistry considered the report of the Laboratory and authorized its publication. In recommending endorsement and publication of the report the Council's referee expressed gratification at the reassurance given by the report that the wax capsules do not inactivate the silver nitrate and called attention to the fact that the use of glass ampules may be an open invitation to accident. (J.A.M.A., Sept. 5, '31.)

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#### **Treatment of Nephritic Edema by Acid**

F. H. Lashmet, Ann Arbor, Mich. (J. A.M.A., Sept. 26, 1931), calls attention to the fact that it has been known for a long time that in the clinical state of edema there is an excess of water and of chlorides in the body. In the case of nephritic edema it has been assumed that the damaged kidneys were unable to excrete these substances and that this was the cause of the retention. Accordingly, it has been customary to restrict sharply the water and sodium chloride intake in the treatment of this type of edema. But, *a priori*, the retention of body water and chlorides may be as easily explained by assuming that the body tissues hold them and that they were never presented to the kidneys for excretion. Obviously, it is important to determine which of these hypotheses is correct, since the treatment based on them is entirely different for each. Experiments were undertaken to determine whether nephritic edema is actually influenced by (a) fluid intake, (b) chloride intake, (c) total ash intake or (d) reaction of the ash. The patients tested had chronic

nephritis with edema. The degree of edema was recorded in terms of body weight. Examples of the results obtained are demonstrated by charts. On the basis of his observations the author concludes that edema is not due to the failure of the kidneys to excrete water and is independent of the fluid intake. Edema is not due to the failure of the kidneys to excrete chlorides. Chloride as sodium chloride increases edema but as hydrochloric acid or ammonium chloride decreases edema. Apparently, the reaction of the compound is more important than the chloride content as such. The reaction of the total ash intake is more important in influencing edema than the total amount of ash. Alkaline ash intake increases edema and acid ash intake decreases edema. In the treatment of nephritic edema, the author has used, during the past two years, a low protein, "salt poor" diet, with a neutral ash, to which are added acids or acid producing salts. The fluid intake has been "forced" rather than restricted. The clinical results have been very satisfactory.

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#### **Results of Treatment of Thrombo-Angiitis Obliterans by Foreign Protein**

From a study of the effects of foreign protein therapy in 150 cases of thrombo-angiitis obliterans, Nelson W. Baker, Rochester, Minn. (J.A.M.A., Sept. 19, 1931), concludes that this form of treatment is chiefly valuable to carry a patient through one of the critical periods of exacerbation, provided gangrene has not already become too extensive. Once he has been carried through such a period, other measures should be substituted. These include education regarding the disease; protection of the extremities from mechanical, thermal and chemical injury; special hygiene, particularly of the feet; limitation of activity; abstinence from tobacco; postural exercises; contrast baths, and sympathetic ganglionectomy in selected cases. In certain cases in which ulcers or limited gangrene are present, and in which healing is well established following treatment by foreign protein, sympathetic ganglionectomy will markedly accelerate the pro-

cess of healing. Treatment by foreign protein is rational for thrombo-angiitis obliterans. It tends to relieve pain and give increased blood supply to the extremities, thus accelerating the healing of open lesions. It has relatively little effect in cases in which there is claudication only or in cases in which there is extensive gangrene. The best results are secured in cases in which there is rest pain, with or without ulcers or limited gangrene.

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#### **Evaluation of Agents That Destroy or Remove Malignant Disease**

A. C. Scott, Temple, Texas (J.A.M.A., Aug. 8, 1931), is of the opinion that the value of controllable heat as a substitute for the surgeon's scalpel cannot easily be overestimated. Cancer cells are rendered sterile at less than 120 F., so that, when surgical removal of all accessible cancerous tissue is accomplished by concentrated heat, one has the combined advantage of surgery and heat, the two most potent agents known for eradication of disease. One may spread disease with a cold scalpel, but it is impossible to spread any kind of disease with a hot instrument. The hot knife has the advantage over all other agents in that its effect is instantaneous and its range of destruction is controllable to less than a millimeter's thickness. Microscopic cross sections of skin incised by means of either the radio knife or the hot loop knife, when properly done, show but a thin veil of dead cells on the cut surface. Evidence of complete coagulation may be seen only 10 microns or one twenty-five hundredths of an inch from the cut margin. Deeper coagulation than this or failure to secure sound primary union is evidence of too slow passage of the instrument through the incised tissue. The dangers and difficulties with the hot loop knife are more or less imaginary and the technic required for its successful use can be acquired by any well trained surgeon who will take sufficient time to master a few essential details. While cancer may be destroyed by various chemical agents, or by radium and roentgen rays, serious difficulties arise from one's inability when using these

agents to measure sharply or to control accurately the depth of penetration and destruction of tissues involved in the disease. In the light of present knowledge, surgical removal gives the best possible chance for permanent cure of cancer, and the utilization of intense heat under perfect control by means of the electrical loop knife augments the efficiency of surgery to a degree hitherto unknown.

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#### **Toxic Effects Following Use of Arsphenamines**

In a ten year period, H. N. Cole, Henry De Wolf, J. M. McCuskey, H. G. Miskjian, G. S. Williamson, J. R. Rauschkolb, R. O. Ruch and Taliaferro Clark (J.A.M.A., Sept. 26, 1931), gave about 78,350 injections of arsenicals in the treatment of syphilis. Of the 1,212 cases studied, 19 per cent in the latent stage showed complications of treatment, against 14.3 per cent in the early stage. Of the 214 patients presenting complications, the ones in the age group 40 to 49 had the highest percentage of involvement and the ones under 19 the least. Females were more sensitive than males, and white females more sensitive than Negro females. Arsphenamine and neoarsphenamine were used in about 97 per cent of the cases and the two 79 per cent and 21 per cent, respectively. The most frequent complication was a severe gastro-intestinal reaction; next, slight skin eruptions with pruritus; next, nitritoid reactions; next, dermatitis exfoliativa; next, icterus and then hemorrhagic encephalitis. The frequency of reactions was about the same for arsphenamine and for neoarsphenamine, though icterus was more common after the injection of neoarsphenamine than after arsphenamine. Four of six fatal cases of hemorrhagic encephalitis were due to sulpharsphenamine. Both cases of purpura were also due to this drug, yet it was used relatively little in comparison to the enormous amount of arsphenamine and neoarsphenamine. Arsenical icterus was twice as common in persons over 35, as were also nitritoid reactions. Arsenical hemorrhagic encephalitis is a complication of young adulthood. A patient sen-



sitive to one arsenical will be more liable to sensitivity to other arsenicals. One of the authors' patients was susceptible to arsphenamine, neoarsphenamine, sulpharsphenamine and tryparsamide. The sensitivity to an arsenical will probably persist, even for years. If the patient has had an arsenical dermatitis one should be very careful about further injections even years later. The percentage of persons having arsenical reactions rises from the sixth to the twentieth injection. The incidence also increases markedly around the fortieth injection. The most severe arsenical reactions were noted in the period from two to three months up to one year of the syphilitic disease. Hemorrhagic encephalitis is essentially a complication seen early in the course of a syphilis, even coming after from two to four injections of the arsphenamines. Though dosage is a factor in the causation of arsenical reactions, one may note them even with very small doses. There were twelve deaths in the series; six from hemorrhagic encephalitis, five from crustaceous dermatitis exfoliativa and one from acute severe arsenical hepatitis, all in patients treated less than six months. The best treatment of arsenical intoxications occurring in the treatment of syphilis is prophylaxis. All patients under arsenicals should be carefully questioned as to untoward reactions, then stripped and the skin examined for evidence of eruptions. Two patients who died of dermatitis exfoliativa, sent to the authors in consultation, had been given another injection of neoarsphenamine after they already had an erythema from the last treatment.

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#### **Material From Liver Active in Pernicious Anemia**

Randolph West and Marion Howe, New York (J.A.M.A., Sept. 5, 1931), call attention to the fact that the chemical evidence at present available suggests that material from liver active in pernicious anemia consists of one or more pyrrole precursors, which may be utilized by the body in the formation of hemoglobin and possibly other cellular respiratory pigments. It must, however,

be emphasized that, although clinical activity has been present after two and three recrystallizations of these quinine salts, the possibility of the presence of highly potent absorbed material can be wholly excluded only when these products have been synthesized. This conception of the function of liver feeding in Addison's anemia raises several points of both theoretical and practical interest. There is a great loss of active material entailed in chemical purification by present methods. Maximal clinical responses of the purest preparations have necessitated the intravenous use of material derived from approximately 40 Kg. of liver, while Castle and Taylor have obtained similar responses with a less refined intravenous preparation derived from 100 Gm. of liver, an amount wholly inadequate when given by mouth. This observation implies either poor gastro-intestinal absorption or considerable destruction in the intestine, probably by bacteria. It is of interest that the pyrrolidone ring, which is present in the substances that have been isolated to date, is readily destroyed by bacterial action, while the rings of the other cyclic amino acids are relatively resistant. The blood picture simulating that of Addison's anemia found in partial intestinal obstruction and in infestation of the intestine with *Bothriocephalus latus* may well depend on destruction of the active material by bacteria or parasites.

#### **Epithelioma of Face**

Gordon B. New and Fred Z. Havens, Rochester, Minn. (J.A.M.A., Sept. 5, 1931), believe that primary complete removal of epitheliomas of the face by surgical measures, including surgical diathermy, is the treatment of choice. For the treatment of inactive lesions, the growth may be excised or removed by surgical diathermy; the tissue removed may be replaced by a full-thickness skin graft or a pedicled flap, at the time of the primary operation. Active lesions, frequently recurrent lesions, and regions which have been subjected to radiation with involvement of cartilage or bone are best destroyed with surgical diathermy, the deformity being disregarded.

Reconstructive surgery should be delayed for at least nine months to a year. The gland-bearing fascia which drains the primary lesions should be removed in cases of carcinoma of the lower lip.

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### **Cocomalt Clinics**

Sometime ago in co-operation with health authorities, cocomalt clinics were established in the drought area of Arkansas and the attending children were placed under the care of an attending physician and a registered nurse. The children were given cocomalt mixed with milk once a day. The average gain during forty days was eight and one-half pounds per child. In thirty children that were checked there was an increase of hemoglobin of from five to fifteen per cent. Cocomalt is readily assimilated and quickly metabolized. It contains malt enzymes which help to digest the starches of other foods.

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### **Vitamins A and D At Their Best**

*For vitamin A therapy*, Mead's Standardized Cod Liver Oil continues to be 4 to 11 times as economical as cod liver oil concentrates. *For vitamin D therapy*, the new reduced price of Mead's Vioosterol when prescribed in the original 50 c.c. bottle, makes it less expensive to the patient than Mead's Standardized Cod Liver Oil or any cod liver oil concentrate. Samples on request of Mead Johnson & Co., Evansville, Ind., U. S. A.

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### **Milk for the Baby**

"The nearer the milk administered to the artificially fed infant approaches human breast milk in composition and sterility, the nearer the artificially fed infant approaches in its general resistance and condition that of normal nurslings."

This statement written by a member of the White House Conference presents accurately the idea back of S.M.A., an infant food developed at the Babies and Children's Hospital of Cleveland, Ohio. S.M.A. is regarded by many physicians to be the closest approximation to mothers' milk in existence.

It resembles breast milk, having the same percentage composition and in addition, the same buffer value, depression

of freezing point, specific gravity, hydrogen ion concentration and caloric value. It is also interesting to note that the fat in S.M.A. has the same character numbers as breast milk fat, such as Polenske, Iodine, Reichert Meissel, Saponification, Melting Point and Refractive Index. Sufficient cod liver oil is incorporated in this fat to make it anti-rachitic.

Like breast milk, S.M.A. is used without modification for the normal, full term infant with excellent results in most cases.

The tuberculin tested cow's milk used as a basis for the production of S.M.A. is under the strict supervision of both Cleveland and Chicago Boards of Health.

For premature infants, and to correct diarrhea and malnutrition, Protein S.M.A. (Acidulated) is recommended. This is a special form of S.M.A. high in protein and low in fat and carbohydrate, with a relatively high acidity. The same anti-rachitic fat is present supplying vitamin "D," and it contains enough lemon juice to make it anti-scorbutic as well.

For infants, children and adults sensitive to milk protein, the S.M.A. Corporation has produced a non-allergic cow's milk, (SMACO 300). Excellent results have been reported.

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### **The Prevention of Simple Goiter**

UNITED STATES PUBLIC HEALTH SERVICE

The ease and simplicity with which goiter prophylaxis is accomplished has nearly been the undoing of this very valuable procedure, according to a recent statement by the United States Public Health Service. Many persons with goiter, attracted by the apparent ease with which the malady may be prevented, have concluded that what is useful for prophylaxis of the simple form is likewise efficient as a means of treating all types of the disease. Much harm has been done by this erroneous assumption. It is necessary, therefore, to caution people that there are certain goiters which are made worse by the ingestion of iodine. More-



over, the measures that may be effective in preventing simple goiter are in no wise useful in forestalling other and more severe forms of the disease.

The following questions quite naturally arise regarding simple goiter: First, why should simple goiter be prevented? Second, is the condition more than a deformity of the neck? These reasonable questions may be answered by citing the experiences of certain foreign countries in which the disease prevails unduly. When unchecked, simple goiter is often associated with mental and physical degenerations, especially deaf mutism, feeble-mindedness, and the idiocy of cretinism. The ill effects of uncontrolled goiter are particularly severe in subsequent generations. Fortunately, the affection has not reached this degree of intensity in the United States, nor is it likely that it will reach it.

The causes of simple enlargement of the thyroid gland may be conveniently classed as immediate and remote. The immediate cause of this condition is now believed to be a complete absence or marked deficiency of the iodine necessary for the normal functioning of the gland. Anything which interferes with the intake or utilization of iodine available in normal quantities may likewise cause enlargement of the organ. Thus, infections, intoxications, faulty diets, and such periods of stress in female life as puberty, pregnancy, or the change of life, may be mentioned as remote or underlying causes of simple goiter. It is a matter of common knowledge that females are more prone to simple goiter than are males.

The most satisfactory method of administering iodine for the prevention of simple goiter is by adapting the remedy to each person in need of it. In this way accurate dosage and nominal supervision is insured. Obviously this method is costly and cumbersome, reaching only a small portion of those requiring the protection. In order to overcome these objections, wholesale prophylaxis by the use of

iodized table salt and iodized water supplies has been suggested. While both of these methods are theoretically sound, it is not yet definitely known whether they are effective and, at the same time, incapable of causing harm to persons with existing goitrous enlargements. Therefore, the individual method is preferable at the present time.

It is likely that the regular consumption of foods naturally rich in iodine will aid in preventing goiter. It is known, for instance, that marine algae, deep sea fish, and crustaceans are particularly rich in iodine. But here again the uncertainty of dosage and economic factors are involved. Variations in the iodine content of food and water probably account, to a considerable extent, for the differences in goiter incidence in the United States. Until more definite knowledge becomes available concerning the value of iodized salt, iodized water, and iodized foods, it appears best to individualize in goiter prophylaxis.

Goiter prophylaxis is most telling in its effects among children between the ages of 11 and 17, especially among girls. Even more important, as has been pointed out, is the institution of appropriate prophylaxis before a person is born. Under the supervision of a skilled physician a prospective mother may receive protection not only for her own thyroid but also for the gland of the expected child. Any plan, therefore, that safeguards the thyroid gland during fetal life, adolescence, and pregnancy may confidently be expected to aid in eliminating simple goiter.

It has been aptly said: "Simple goiter is the easiest of all known diseases to prevent." Where, then may one turn for explicit advice? Either the family physician or the local health officer is well qualified to suggest the most effective means of preventing this rather widespread affection. Self-drugging with iodine is dangerous and should be shunned.

### Hormone and Cancer

The effort to influence the growth of cancer by various organ extracts is being widely made at present. Logically it might be profitable to inquire why such trials are being made since every pathologist sees cancer growing freely in those organs whose hormonal activity is high. The work of Bischoff and his colleagues should be repeated with a tumor that does not spontaneously recede and, if the results are the same should close the discussion on the possible therapeutic action of extracts from the group of organs tested. (J.A.M.A., Nov. 1, '30.)

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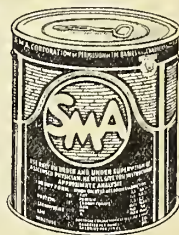


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### Skull Fractures and Their Treatment by the Country Doctor

BOYD H. POPE, M.D., Kingman

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

It may be somewhat presumptuous on my part to attempt to write a paper on the subject of skull fractures. But I will say at the outset that I will not exhaust the subject by any means, so there will be plenty left for others to say who are interested. The community in which I am located is situated on Highway No. 54. This era of great industrial development has brought about an uncontrollable desire for speed. Everybody is in a big hurry to get somewhere or nowhere. The result is a great increase of automobile accidents, more than 40 per cent of which result in skull injuries.

During the past seven or eight years there have been admitted to our hospital about sixteen cases of skull injuries, most all of which were of serious import. These cases had to have some sort of treatment by the local physicians. Many were too seriously injured to be moved away to another hospital. In several of these cases the actual amount of damage could not be ascertained at once, and the management therefore could not be determined upon at first. In this paper we shall only present a brief summary of the positive findings, and our method of treatment, with the hope that it will stimulate a discussion of the management of acute head injuries which are too frequent these days of high speed motor transportation.

We all know that in skull fractures the important thing is not the injury to the bones but rather the extent of damage sustained by the intracranial contents.

Location of fractures of the skull may be considered under two main heads: Fractures of the vault, and fractures of the base. There seems to be a rather

general opinion that the latter are more serious, but from the standpoint of the actual fracture it makes little difference whether the vault or base is involved; the treatment is essentially the same. The resulting intracranial damage is the all important thing. Many linear fractures of the skull are of very little import, in fact, I think they would be overlooked were it not for the *x*-ray. Fractures of the vault are usually due to localized trauma, while those of the base are almost of necessity due to massive blows. A fracture of the base, therefore, generally indicates a much more severe blow and consequently a more serious intracranial damage. These basal fractures are more commonly compound in that they frequently involve the cribiform plate, or the petrous portion of the temporal bone, if not both, and with the commonly associated rupture of the tympanic membrane giving an outside communication with the sub-tentorial space, resulting sometimes in meningitis.

For convenience we will use the classification of skull fractures dividing them into simple linear, compound, and depressed. As before stated, the simple linear fracture may be of no consequence, unless it has crossed and torn the middle meningeal artery or its branches, with resulting hemorrhage and extra-dural clot. This class of cases if they show any irritative lesions or motor disturbances must be treated the same as depressed fractures.

All compound linear fractures, especially those showing the escape of blood, cerebrospinal fluid, or both, should first receive adequate treatment designed to prevent infection from gaining entrance into the damaged brain tissue which would result in meningitis. Then if pressure symptoms are manifest, a decompression is indicated in most cases, unless spinal puncture drainage gives prompt relief. If so, it should be repeated



in three or four hours with the hope of averting an operation.

We believe that all depressed fractures of the skull should be operated, even though the depression seems to be slight. Here the *x-ray* may help us in the matter of diagnosis. Yet one should not put too much dependence in the *x-ray* evidence for it often proves fallacious and much greater displacement of bone will be found by the operator than is apparently present in the *x-ray* plate. Here clinical symptoms are more important than *x-ray* findings. The usual reasons given for operation of depressed skull fractures are the relief of immediate pressure upon the brain and sometimes for cosmetic purposes. In the case of slight depression, one is apt to consider the case as being in the non-operative class. However, if the rule is made to elevate and expose every depressed fracture, the surgeon will be surprised by the actual amount of damage found beneath the depression, damage which may eventually result in a traumatic condition leading to a possible epilepsy. The depressed bone should be elevated and the dura incised; and, if as frequently happens, traumatized brain tissue is found, this should be gently removed by moist sponge or light suction, thereby protecting the normal brain tissue from any chemical action of the dead brain substance. In some of these depressed fractures there will be found evidences of high intracranial pressure. The treatment of such cases, in addition to raising the depressed bone, which should be done by first making a trephine opening at the edge of the depressed fragment and then gently lifting the fragment, bearing in mind the possibility of tearing the dura beneath, will best be followed up by a subtemporal decompression which allows a much safer and surer drainage of the intracranial fluid. To attempt drainage in a high compression case at any other point on the vault would most likely result in a brain hernia and other frightful sequelae.

There are few operations in surgery that have such wide application and immediate beneficial results as cranial decompression, and particularly by the

subtemporal route. It is a comparatively simple operation, requiring no special technic other than thorough knowledge of the anatomy of the temporal region and the avoidance of operative complications, and if they do occur, to use the best method of controlling them. Naturally, careful hemostasis is a most important factor in obtaining good results; due respect and regard for the delicate nerve tissue being observed and a most strict asepsis.

Cranial decompressions were formerly performed over the upper areas of the vault. Many disasters resulted from this procedure and the operation became a matter of last resort until Cushing placed the operation upon a rational basis.

The technic of the sub-temporal operation as done by us, and according to Sharpe's description, is about as follows: The head is closely shaved on the half to be operated on. This is usually the right side unless there are signs indicating lesion of the left cerebral hemisphere or if the person is known to be left handed. The reason for this choice of location is to avoid the motor speech area, which is situated in right handed persons in the posterior portion of the left third frontal convolution, and vice versa in left handed persons. The side of face and head is carefully scrubbed and then treated liberally with alcohol, then an application of iodine or surgical mercurochrome followed by another application of alcohol.

The incision is made vertically upward through the scalp from a point just above the zygoma and one-half inch anterior to the external auditory meatus, to the middle of the parietal crest overlying the origin of the temporal muscle; it is about three to three and one-half inches in length and parallel to the fibres of the underlying temporal muscle. The fascia is incised vertically and the fibres of the muscle are split longitudinally and retracted exposing the squamous portion of the temporal bone. A periosteal elevator is used to separate the muscle and periosteum from the underlying bone. Be careful not to destroy the attachment of the muscle at the parietal crest, other-

wise the closure of the muscle will be greatly weakened. A trephine opening is now made at the lower angle of the operative area, as this point is the thinnest portion of the temporal bone. With a rongeur the bone is removed upward and laterally until an opening about two by three inches is made. Before opening the dura see that all bleeding points are stopped. All arteries in the soft tissue are tied with small catgut. Any bleeding from the bony structure is best controlled by bone wax. The dura is carefully incised in a crucial manner, having due regard for the underlying cortex. It is important to incise the dura downwards to the very base of the skull so that the middle fossa of the skull can be easily and freely drained.

This procedure is very important in all brain injuries with or without fracture of the skull and associated with an edematous, swollen brain. If the dural opening is large enough any pathological lesion may be freely and safely dealt with and any existing sub-dural clots should be removed. Before closing the wound a rubber tissue drain about one-fourth inch in width and several layers in thickness is inserted at the lower angle of wound and well under the temporo-sphenoidal lobe as far as possible; in this manner excellent drainage is afforded; a second drain may advantageously be placed under the dura at the upper angle of the wound if the lesion is high in the vault of the skull. After all bleeders are stopped each layer of tissue, external to the dura, is closed with interrupted catgut. The dura is not closed for the reason that the injured brain needs some room to expand and give relief to the intracranial pressure. There is no danger, apparently, in leaving the dura open as the muscle at this point is very strong and offers a safe protective covering.

This incision places the cranial wound far enough forward and below so that the motor areas of cortex should not be injured by the necessary manipulations. Drainage should be removed at the end of forty-eight hours as longer retention favors infection. Usually some draining

will continue for two to four days longer.

The most important diagnostic signs in determining the question of operative interference are examination of the eye grounds, condition and pressure of spinal fluid, local symptoms and general condition of patient, such as pulse, blood pressure, respiration, and temperature.

The limited experience that we have had leads us to believe that nearly all compound, and all depressed fractures should be operated on, the former to prevent infection and the latter to relieve pressure symptoms and to adequately treat lacerated brain tissue. Local pressure manifestations are definite indications for operation, the subtemporal decompression being the procedure of choice.

I am sure that symptoms of increased intracranial pressure alone do not call for immediate operation. These cases can often be relieved by the use of hypertonic solution intravenously, and lumbar puncture which should be performed immediately on admission of case, but if after repeated punctures, patient does not improve, subtemporal decompression should be resorted to. There are some cases of compound basal fracture which, in the absence of pressure symptoms, after bleeding stops and with no other untoward symptoms, should be given expectant treatment for perhaps forty-eight hours. The continual escape of bloody cerebral fluid endangers the patient to infection. This symptom is usually due to a gradual rise of intracranial pressure, thus putting these cases into the operative class. All cases being treated by the palliative method should be checked frequently with the ophthalmoscope for eye symptoms of increased pressure, and also by the measurement of the pressure of the cerebrospinal fluid at lumbar puncture. The latter test will reveal in these patients any increase in the amount of intracranial fluid.

There are two periods in which these cranial injuries should not be operated upon, no matter how seriously the patient is injured nor how high the intracranial pressure may be. These periods



are: First, the stage of initial shock immediately following the brain injury when the pulse rate is 120 or higher and accompanying extensive brain injuries. An operation during this period of traumatic shock is likely to add to the shock already sustained. The second period in which no operation should be performed is the stage of medullary edema, the terminal moribund period, operation or no operation; when once the pulse has reached its lowest level of medullary compression and then begins to ascend rapidly to 100, 120, 140 or higher, then an operation only hastens the end. If these two periods in operative treatment of brain injuries are avoided and the latter of these, medullary edema, usually can be anticipated, especially if the patient is under observation, then the mortality of brain injuries will be decreased. If these two principles are observed in regard to the treatment of brain injuries, and more operations of decompression performed between the period of shock and the terminal period of medullary edema, I believe the operation of decompression will come more and more into favor as the treatment of these brain injuries that show definite evidence of fracture and high intracranial pressure, as against the "letting well enough alone" policy that is practiced in some hospitals.

I will now review a few of the skull fracture cases that we have had in the last few years in the Kingman Hospital. A man about fifty-eight years of age fell from a stool and struck his occiput on the floor of the filling station. When brought in he was partly conscious, had no hemorrhage from ears or nose, but vomited and had fixed pupils. After a few hours, consciousness was lost and operation suggested but was rejected by family. Fifteen or eighteen hours later temperature rose and death resulted, with temperature of 106°. If spinal puncture readings had been made, I believe we would have found evidence to warrant a decompression, and perhaps saved this patient.

A boy of three and a half years was kicked on the right anterior vertex by a

mule colt, resulting in a compound fracture with laceration of brain. He was brought in by another doctor and we cleaned up the wound and closed the scalp as nearly as possible. Some infection resulted but the boy recovered with cerebral hernia which still exists covered by thin scar tissue. He wears a leather molded cap and is apparently nearly normal mentally. The loss of bone in this case was sufficiently large to give adequate drainage, so a further decompression would not have done any good.

A boy of five was struck by a car, receiving severe fracture of parietal region, with ear and nasal hemorrhage and profound coma; fracture was elevated and fragments removed, but death resulted in a few hours. A subtemporal decompression in this case might have given some relief, but we have no way of knowing.

A man of sixty was found semi-conscious under a tree which he had been trimming. He vomited and had some serum leaking from an ear. A visit at his home late in the evening with a probable diagnosis of fracture of base. Next morning he was brought in and given glucose and calcium chloride. Then we did a spinal puncture with clear fluid, but stupor continued and fever developed, so we decided to do a right subtemporal decompression. There was a great deal of serum and the brain appeared shrunken; operation was of no benefit. Fever increased and death occurred forty-eight hours after injury. I believe an earlier operation was indicated. The shrunken brain condition was probably due to the glucose and calcium chloride given intravenously.

A boy of six fell from a barn loft, striking his head on a concrete floor, receiving a fissure fracture in left anterior temporal and parietal region. His eyes deflected to the right, he vomited every thirty minutes, and was in profound stupor. He was brought in thirty miles, x-rayed, showing fracture and operated at about three hours after injury. Left subtemporal decompression was done. Extensive subdural hemorrhage was found and bleeding artery probably an-

terior meningeal was ligated. Subdural drainage was placed and rapid and perfect recovery ensued.

A man of fifty-five received a compound fracture of left temporal bone, gouging external canal out and portion of mastoid bone down to internal structures making a tunnel. He was semi-conscious at 9:00 p. m. The next day with no improvement, a left subtemporal decompression was done with subdural drainage. He made a good post operative recovery, but developed a traumatic psychosis, and is now in an asylum.

A boy aged nine fell from a car and received a depressed fracture of right upper occiput about one and one-half by one-half inch in area. Compound cranial wound was trephined and depressed fragment elevated and removed, but dura not opened. Normally he was said to be a bashful backward lad, but from the first visit for ten days he was irascible and profane. We had to force food and medicate him with stomach tube. A noteworthy circumstance was that on the third day fever rose to  $104^{\circ}$  with a flat abdomen and we regretted not opening and draining the dura, but castor oil per tube acted and fever subsided. Recovery was uneventful from then on. He is now well and normal except his neighbors think he is spoiled.

A man about thirty received a fissured fracture of right temporal region, high and extending into parietal. He was drunk and tipped his car over into a ditch. He was in semi-conscious condition; the question was: How much was booze and how much injury. He vomited several times and *x-ray* showed fracture. Spinal puncture revealed slightly blood-stained fluid. Operation was decided upon and four hours after injury right subtemporal decompression was done with subdural drainage of blood stained cerebrospinal fluid. He was awake and normal the next morning and went home in a week. I suppose we will never know if his operation was absolutely necessary, but then he should not have been drunk.

A man about sixty was breaking a colt which ran away and threw him into the side of a moving train, producing a

severe compound fracture of occiput with depression. He was in profound stupor, bleeding at ears and mouth but with full pulse, spinal puncture was almost pure blood. Compound wound was cleaned and skull trephined to raise depressed area, but we hit a sinus and hemorrhage was so severe that we packed and did a right subtemporal decompression with subdural drainage. He lived two days. Without the operation, we think he would have lived only a few hours.

A woman of fifty in a car which struck a railroad engine, received severe compound fracture of frontal and left parietal regions. A large area of bone was raised and removed with lacerated brain tissue and death occurred in twelve hours—a hopeless case from the start.

A man of twenty in a car which struck a moving train received severe comminuted fracture of left temporal and frontal area. Lacerated wound of left brow. He was carried one-half mile entangled in the wreck and arrived at the hospital about one and one-half hours after the injury was received. General conditions were so bad, severe hemorrhage, shock and extensive fractured area, that we thought he was dying and put him to bed after controlling hemorrhage and cleaning wounds, where he expired in thirty minutes.

A boy of eight, riding with his sister aged eighteen, in a car which collided at a highway intersection with another car, received a depressed fracture almost exactly the size and area of the squamous portion of left temporal bone. Bleeding from left ear and mouth, with right eye deflected and left obscured by extensive orbital hemorrhage but not deflected. Semi-conscious, no *x-ray* or spinal puncture made as fracture was plainly palpable. Left subtemporal decompression was done at once with the incision in line with center of depressed area and middle of upper side of root of concha. Trephine was made on solid cranium above depressed area and bone removed until nearly oval area about one and one-fourth by one and one-half inches was taken out. Dura incised vertically and right frontal lobe of brain lifted, releas-



ing considerable blood from under it. Drainage with rubber tissue inserted. There were a few flakes of brain substance observed with hemorrhage as it flowed out. Wound was closed. As operation was completed, right eye was back in normal position. Patient left hospital on ninth day and wound was healed in two weeks. He was a quiet, reserved lad; hard to get response from with questions, which parents thought normal for him. He is now well and they consider him normal in all respects.

A young man, barber by trade, was taking some children to school and ran into another car at an intersection. He received a depressed fracture of the right temporal area and also a depressed zygomatic arch. About an hour after the accident he was brought into the hospital unconscious and bleeding from the right ear. After getting him warmed up, in about an hour we operated, removing a large piece of depressed temporal bone and raising the depressed zygoma; then incised the dura, inserted a rubber tissue drain, and closed the wound. There was considerable free blood beneath the dura which drained freely for several days. His mental condition cleared up in about six days. I feel that a delayed operation would have been disastrous in this case.

Another case, a man about fifty, drove his car in front of a moving train with the result that he sustained a right temporal fracture. He reached the hospital about one hour after accident, in a deep stupor, right eye bulging, blood escaping from right ear and nose. For unavoidable reasons the operation was not done till about five hours after accident. A right subtemporal decompression was performed. In twenty-four hours the patient showed marked improvement and the exophthalmos rapidly disappeared. Patient made a complete mental recovery.

Another patient, riding a motorcycle, sideswiped a car and was thrown heavily upon the hard road surface. He was brought into the hospital unconscious and bleeding from right ear. No evidence of depressed fracture. All evidence pointed to a right sided linear fracture involving the petrous portion of the tem-

poral bone with rupture of the tympanic membrane. No eye symptoms or other local disturbance discernible. Ear was carefully wiped out with alcohol and mercurochrome solution. Patient regained consciousness in twenty-four hours and at end of two days returned to his home in El Dorado, Kansas. This case showed no marked disturbance of pulse or respiration, with no evidence of intracranial pressure. Expectant palliative treatment was instituted.

Along with the above cases, there have been some with nothing more than concussion which is of course a mild form of brain injury. These cases had unconsciousness for a short time, sometimes followed with some headache. They usually were not x-rayed, so we don't know that there were any fractures among them.

I realize that the above cases are briefly described but think most of the salient points were brought out which will give you an idea of the severity of the cases and the course pursued as to their treatment.

In the past there has been a tendency on our part to delay positive action from a number of motives. Primarily of course, a lack of knowledge of the proper course to pursue; my education in the beginning with head injuries was very scant. At that time head operations consisted in raising the depressed bone at the existing wound. The older text book description of head operations were more complicated. Later, William Sharpe of New York came out with his book on treatment of brain injuries, which to me, seemed to put a new light on the surgical treatment of these severe cranial injuries. I do not mean that his ideas were entirely original with him but he did give a lucid description of how the country doctor with average surgical ability and knowledge could safely and efficiently care for some of these severe and unfortunate head fractures.

The subtemporal decompression operation that he describes is an ideal one. It has many uses and should be used more frequently. Especially is this true in brain injuries, brain abscesses, brain

tumors, and in selected cases of brain injuries at birth.

This operation, besides being less difficult technically than some of the older text book descriptions of decompression, exposes an area of brain most frequently involved. This permanent decompression opening does not weaken the skull in that the thick overlying temporal muscle protects the brain most adequately, so that cerebral hernia is not feared. The operative mortality is low as compared to other methods. Even though the operation might be performed unnecessarily sometimes, the patient is none the worse. No more than when a gall bladder is removed when it should have been left where it belonged. Patients with intracranial conditions should not be permitted to become blind, epileptic, or reach the serious stage of medullary edema, without a subtemporal decompression being performed early.

#### CONCLUSIONS

All cranial injury cases, when first seen, should be given treatment aimed at combating shock, limiting the spread of infection, and the control of external hemorrhage.

Ascertain by careful examination if fracture is present, then determine, by ophthalmic examination and lumbar puncture if there is a gradual rise of intracranial pressure, in which case, do a subtemporal decompression. Continual rise in intracranial pressure brings on medullary edema and ultimately leads to death.

If it is evident that there is a depressed fracture, or a compound basal fracture with hemorrhage from ears or nose, or disturbances of respiration, pulse, sensorium, and loss of consciousness, do a subtemporal decompression as soon as an operation can be undertaken.

Do not operate in the presence of shock. First institute treatment to combat same, then determine if operation is indicated; or if seen late when medullary edema is present, do not operate. It will do no good.

As a rule early decompression is indicated in severe intracranial injuries; while palliative treatment, such as rest

and the use of hypertonic solutions intravenously, the use of saline cathartics, and sometimes spinal drainage, will be sufficient for the mild brain injuries showing only moderate rise of intracranial pressure.

If this paper has been of sufficient interest to provoke a friendly exchange of ideas on this very important subject, I shall feel repaid for my feeble efforts.

—R—

#### Science, Art and Bunk in a Sacred Calling

R. C. HUTCHESON, M.D., Elk Falls

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

In my boyhood memories three classes of people stood prominent, as those knowing about all that was necessary of human society: the preacher, school-teacher, and the doctor, and why not? For these were supposed to represent intelligence and common sense. We sometimes wonder if comparisons would commend their standing then or now. Do you, my fellows in the profession, know of any bunk in your calling? Needless to ask, all are familiar with it. But who is to blame? Would there be quack doctors if there were no quack people? Do the people demand science and common sense in the treatment of disease? Some do.

Our first idea of a doctor's duties is to relieve pain, to assist nature in restoring health, to remove infections, heal wounds and, when no more could be done, smooth down the pillow of the dying and clear his path to the grave. Then speak words of comfort (if he had the art) to the sad and bereaved. This is the most useful sacred calling of all and worthy of a place of honor and appreciation among useful men. Is this the most service our patrons require of us? Or is it often the art of bunk?

Dr. Bailey in his book "Fifty Years a Country Doctor" (I was jealous when I saw the title, I wanted to write that book myself) estimates that several thousand in that time have been his patients. One-fourth of them, he says, had something the matter with them needing the science and art of medicine. What about the other three-fourths? Were they mentally sick? They would resent such a



charge. They demand diagnosis and prognosis of serious nature.

Being a country practitioner I am not so familiar with bunk as some but know it exists. A patient who spent some months in or near the bed, but at the table three times a day, after tests, laboratory, symptomatic and otherwise, was told no medicine was needed, disease not being shown. He went to a D. O., who made the usual discovery of dislocated vertebrae, "replaced," adjusted three times a week up to a hundred dollars. The bill snapped the mental vertebrae into action and the three meals a day went on and accumulated more money and went out to your healer that does equally as good service by absent treatment with satisfaction to the patient.

A most energetic housewife and barnyard servant with a nursing child, weakened as you would expect, developed a hacking cough, and was advised by sympathetic neighbors to consult a specialist for tuberculosis. He made a very careful and impressive examination—for careful examinations leave it to the specialist. Then with the eclat and art of bunk, told her that he was compelled to tell her frankly to set her house in order as she had but three months to live. What a shock to the mother of a brood. Mourning and distress settled over the home until a wise but blunt physician told her honest family that rest was required and labor must cease. This didn't carry full conviction but a "healer" of Wichita giving her "treatment" a hundred miles distant gave the same advice, sending her to bed from 9 to 10 a.m. and 3 to 4 p.m. and absent treatment during those hours with no labor, and recovery is wonderful. The "Healer" was artful in bunk.

Your educated, well-to-do paupers in thought, but rich in money, demand and accept bunk. A rich man of Kansas City, employed a Negro hoodo doctor with office mysterious with colored curtains—are these a part of the science of health? Who is to teach the unthinking? We have good writers. Dr. Lerrigo of the Capper Publications, Dr. Clendening of the Kansas City Star, are both intelligent useful writers, and many others are

read. Some medical men might think them over. Are you advising promiscuous extractions of teeth? Have they no function? They have! And useless extraction is a crime and the advice often bunk.

How much knowledge is necessary to succeed in the healing art? What is success? I have known students earnest, with active brain, who devoted their time to study. We thought they would be brilliant and successful and command respect for their knowledge. Others studied little; doomed we thought to disrespect and failure. We visited each later.

The poor student who just got by lived in a fine house, had several courses at lunch, an over-dressed wife, an uncontrollable child, a fair maid criticized by her mistress and praised by the master, boasting of surgical operations and large fees and money for pleasure.

The other lived in a modest house, had a modest sensible wife that did her own serving nicely, two lovely bright well controlled children, modest income but rich in home and family, attractive to sensible people, his services worthy of obtaining and boasting the science and art; the other surprising us that his patients survived his bunk surgery. People demand bunk and get plenty of it. Three times in my half century of medical association the transplantation of glands has come around. First the calf, then monkey, then goat.

The first experiment was by two young M. D.'s, yet in their leisure times, encouraged by some progressive cowboys of Medicine Lodge, where many new things start before they go to Wichita. The foolish subject was more anxious for vim than sense like the later foolish ones. With a chunk of ice drawn across the skin followed by a small stream of warm water followed by the supposed cut, a few monkey shines and he was easily convinced that his force was increased.

Tom McNeal of the Crescent wrote it up and many smiles were caused by his imaginary results. Fools still accept the suggestion, pay money and swear by their bunk doctors.

I have heard of a well to do lady go-

ing to a sensible student and practitioner asking for treatments. He told her she did not need medicine. A change of diet and exercise was advised but after insistence he prescribed and continued to cater to her pleading for some months. Then again forcefully impressed the unscientific treatment. She left in a huff, called on another M. D., explaining her trouble as was formerly given. Another was solicited and he agreed that medicine was not needed but physical culture, and sent her to a practitioner who treated her to her delight three times a week at two dollars per and is still down one-half to the sender.

A doctor from Kansas City prayed or swore over his patients with equal fervor as they desired, gave a strip of gauze to lay over the spine to "electrify the nerves." A lady who was a candidate for superintendent of schools asked two months later of a doctor if he could tell if the electricity was still in the gauze. She was asked if she would teach children that cotton cloth was a conductor of electricity. She of course gave no intelligent reply. She was the candidate in an intelligent county but not elected.

Religious cults, faith in mystery, relieve the minds of the imaginary and sometimes we think with Ironquill—

"Human hopes and human creeds have their roots  
in human needs,

And we would not care to strip from the washer-  
woman's lips,

Any songs that she can sing; any hope that songs  
will bring

For in them she has a friend that will keep her to  
the end."

Can you resist the demand of bunk patients? If skillful you may and will enjoy old age better if you do. It is difficult to teach those who do not wish to learn. "Experience joined with common sense to mortals is a Providence." Judge Taft was asked what law was most violated and he answered, "The law of common sense."

To bring the people to appreciate and use common sense is our mission in taking up the science and art of medicine. And to have them recognize and avoid bunk is the highest mission of a sacred calling.

### **Therapeutic Fever Produced by Diathermy in General Paralysis and Tabes Dorsalis**

WILLIAM C. MENNINGER, M.D., and

RALPH M. FELLOWS, M.D.\*

The empirical basis of non-specific treatment of mental disorders is based on the very old observation that many of them are benefited by inter-current infectious diseases. According to Bassoe, between 1860 and 1870 Dr. Rosenblum of Odessa inoculated the organisms of relapsing fever, malaria and typhoid, into patients with dementia paralytica. He did not publish a report of this matter at the time for he thought it would not be safe for him to live in Odessa if he did, but in 1876 he wrote an account of it and published it in the Odessa County Bulletin. A translation of this paper by Oaks appeared in 1879 in the *Archive fur Psychiatrie*. This was emphasized again by Wagner-Jauregg<sup>2</sup> in 1887 and in 1889. He attempted to inoculate four patients with erysipelas but failed. He then attempted to use tuberculin<sup>3</sup> in order to produce artificial fever and later a polyvalent typhus vaccine containing living bacilli which had lost their virulence thru saturation with immune serum. Both of these produced fair results. He next noted that beneficial effects in paralytics followed a chronic suppurative disease and attempted to produce suppuration by a killed staphylococci culture, but this was not successful. Wagner-Jauregg's first attempts<sup>4</sup> at malaria were in 1917 when he inoculated nine patients. One of these patients died with epileptiform seizures during the fever; two remained unchanged, two showed slight improvement, and the remaining four had complete remissions within the first two to six months after treatment. In three of these cases remission had persisted seven years later. Following these initial experiments the results were very soon verified by many other continental writers. The first report in this country was made by Lewis, Hubbard and Dyer in October<sup>5</sup> 1924, from St. Elizabeth's Hospital, Washington, D. C.

Since that time a great many reports

\*From the Menninger Clinic Topeka.



of malaria treatment have been made and there is now a uniform agreement that between thirty and fifty per cent of cases of paresis treated with malaria show remissions. Another thirty to forty per cent are said to be benefited although not sufficiently to resume normal activities. These figures vary with the clinic and tend to be even higher in European reports. The result depends largely on the particular type of paresis treated and the stage of development at which treatment is given. There is a general agreement that the expansive type responds better than any other clinical form and undoubtedly the earlier the treatment is given the better the results have been. There have been several very encouraging reports of treatment of tabes as well as cerebro-spinal syphilis with malaria.

#### DISADVANTAGES OF MALARIA

The advent of malarial treatment of neurosyphilis ushered in a new era of hope for these diseases. It has by far been the most satisfactory therapeutic measure developed and yet it is attended by many difficulties, disadvantages and even dangers. From personal experience we list these as follows:

1. Malaria is often difficult to obtain, particularly in the Northern and Western part of the country. It must be given from one patient directly to the next. In our own experience when we first attempted to obtain it we brought three individuals from a distance of three to four hundred miles only to have their chills stop at the time we wished to use them. We made three attempts to have malaria serum, packed in ice, sent special delivery air mail without success. Finally we transported the patient to the Colorado Psychopathic Hospital, where, through the courtesy of Dr. Franklin Ebaugh, we left our patient to be inoculated and returned for him when his chills had begun.

2. The malarial paroxysm cannot be controlled. At times even though the patient's syphilitic condition demands more fever therapy, his physical condition may necessitate stopping the course of the chills because of their severity or their

too frequent occurrence and once stopped it is usually a matter of some months before the immunity will permit a second inoculation.

3. Severity of chills cannot be controlled and in some cases they produce too violent a reaction in the patient and in many other cases they produce too weak a response.

4. In a great many cases the malaria dies spontaneously and prematurely, after perhaps the sixth or seventh febrile reaction. A second inoculation rarely takes.

5. Certain individuals have an immunity to malaria, particularly the colored race. Even in the susceptible individual there is a considerable time lost often in waiting for the chills to develop after the inoculation. The chills ordinarily develop from the fifth to the fifteenth day after inoculation, during which time no other treatment can be given and if at the end of that time no chills have developed one has to again inoculate and hopefully wait through another period of incubation.

6. No medicinal treatment can be given during the course of malaria either during incubation or during the period of paroxysms.

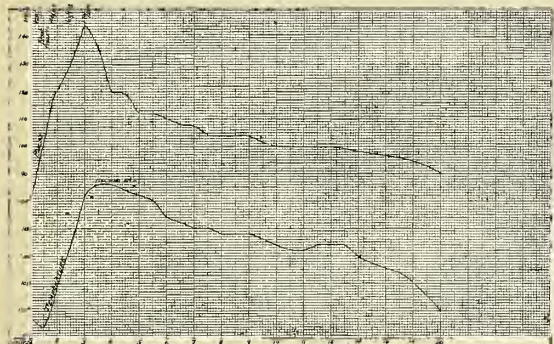
7. There is at least a theoretical disadvantage in giving the patient other diseases. While this may not be of much practical importance, actually it is often a stumbling block for the relatives, and it unquestionably does damage to various organs of the body, particularly the liver and spleen.

8. We have just learned that in a certain district in Michigan, the public health men ascribe the source of an epidemic of malaria to some paretic patients under malarial treatment.

9. Last but not least, there is considerable danger in the actual use of malaria because of the increased mortality rate under this treatment. This is recognized by every one who has used malaria and it varies from one to five per cent and even higher where cases are not carefully selected. It is not altogether devoid of risk even in carefully selected cases.

## THERAPEUTIC FEVER BY DIATHERMY

In addition to the treatment of neurosyphilis by malaria, other methods of producing febrile reactions have been suggested and tried, particularly relapsing fever, soduku or rat bite fever, and the injection of foreign protein, chiefly



Legend: Temperature (lower line), pulse (upper line curve) with diathermy treatment. Number of hours are marked at the bottom of the graph and blood pressure at the top.

in the form of typhoid vaccine. The exact mechanism of the therapeutic action of the malaria plasmodium in producing the beneficial effects noted in the course of neurosyphilis is not thoroughly understood. Various theories have been suggested. Beneficial clinical results would suggest that there must be a corresponding alteration and transformation of the underlying causative agent of neurosyphilis which may be in the reaction of *Treponema pallida*, or may be in the various anatomical elements in the brain. The chief theories which have been made are the response of the reticuloendothelial system to the malarial organism; the effect of the fever on the spirochete, the leucocytosis (which is not constant); a biochemical reaction from the introduction of a foreign protein; a regeneration of immunity processes initiated by the malaria; an increase in body metabolism with the result of removal of accumulating waste products; an increase in the permeability of the meninges and small capillaries in the brain which permits protective substances from the blood to enter in the brain tissue; and the effect of immune bodies produced by malaria.

The fact that there are so many theories only emphasizes our ignorance of the situation. Particular stress has been placed on the biochemical reaction

resulting from the introduction of a foreign protein. In order to settle the controversy concerning the effect of the production of the fever without the introduction of foreign protein Neymann and Osborne experimented on laboratory animals with diathermy to produce heat. They published their results of these experiments in 1929<sup>6</sup> and have subsequently done a great deal of work with diathermy in the production of fever in the treatment of patients with paresis.<sup>7, 8</sup>

In addition to the method of heat produced by diathermy, several other methods have been attempted to induce fever without the introduction of any foreign substance into the patient. Mehrtens and Pouppirt employed continuous hot baths.<sup>9</sup> Hinsie and Carpenter<sup>10</sup> used an apparatus termed a radiotherm, employing high frequency currents. And Wilgus and Lurie<sup>11</sup> have used extensively an electric blanket in addition to using diathermy.

## TECHNIQUE IN DIATHERMY

The only important contra-indication for the use of diathermy is the poor physical risk. Because of the fact that it can be controlled it has fewer contra-indications than malaria, although in general the same contra-indications hold. Treatments are given at any desired time, in some individuals three times a week, in others twice a week, and in some instances only once a week.

In every instance the patient is given a cathartic the night previous to the treatment and because of occasional vomiting, he is given no breakfast the morning of the treatment. It is essential that both the bladder and bowels be emptied immediately before the treatment.

We have attempted using both the standard pack bed as well as the regular hospital bed. For patients who are not delirious and particularly those weighing over 175 pounds, we have found the regular hospital bed much more satisfactory. For the non-co-operative patient the pack bed is superior because restraining sheets are so much more easily managed. The patient lies flat on his back. The bed having been prepared with a large rubber sheet over the en-



tire mattress and a rubber pillow being used.

The electrodes are solid tinfoil, one being placed on the chest, one on the abdomen, and a larger one on the back. These vary in size depending on the individual and are cut to conform with the configuration of the body so that the chest and abdomen and back are pretty well covered by the electrodes. The electrode at the back is about equal in size to the total area of the two used on the anterior surface. Electrode jelly is spread over the electrodes and over the skin surface. Any abrasions are covered with adhesive tape and the electrodes are held in place by a many-tailed surgical abdominal bandage. This bandage is pulled snugly around the body and pinned to hold the electrodes in place. The patient is covered with a sheet, then with a rubber sheet and from seven to eight blankets which are tucked about the patient's shoulders, sides and feet.

A careful record is kept of the blood pressure, pulse, and temperature. The blood pressure cuff is placed on either arm which must be left out from under the blankets and restraining sheets. It is frequently necessary to take the temperature rectally, particularly in patients who are not co-operative. We do not regard axillary temperature as at all reliable. The temperature, pulse, and blood pressure are taken every fifteen minutes until the temperature reaches 101 degrees, after which it is taken every five minutes. We do not permit the pulse to exceed 150 beats per minute nor the systolic blood pressure to rise above 180 millimeters.

We are using a Fischer-Cycle 60, voltage 110, type SPD diathermy machine. The current is started at 2400 milliamperes and is maintained at this point from eight to ten minutes until the patient begins to perspire freely. Then the dosage is increased rapidly to a maximum of 40 milliamperes per pound of body weight within 30 to 40 minutes.

The patient is permitted to take warm water occasionally during the treatment. When the temperature reaches 104 to 105 degrees the current is cut off. The pa-

tient is kept wrapped in the blankets and rubber sheet until the temperature is returned to normal, which requires from three to twelve hours and occasionally even longer. We have found that some patients, despite the best insulation, have a rapid fall of temperature while others with even only fair insulation maintain a very slowly falling temperature over a long period. In some instances the temperature rises even after the diathermy has been cut off. In one instance, just twelve hours from the time the diathermy had been stopped and the patient had been entirely uncovered and sponged, the temperature was at 101. One hour and a half later, the temperature had risen to 104.8 degrees and for the patient's safety we used cold sponges and ice packs to reduce the temperature.

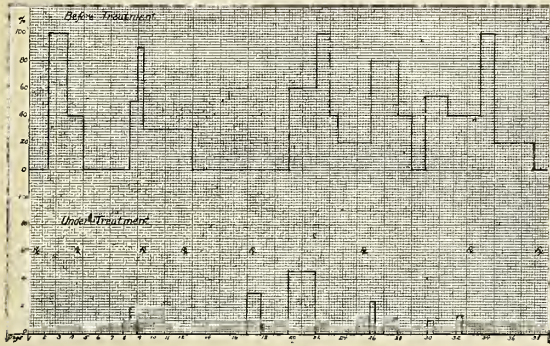
Ordinarily after the current is discontinued, an ice pack is placed at the head and in some instances it has been much to the patient's comfort to cover the face with cold cloths. This tends to reduce the temperature so we use it only for co-operative patients who demand it to ease their restlessness. Immediately following the cessation of the current the patient is given fruit juices and milk copiously. In some instances we have given as much as four quarts of liquid during the time the temperature is returning to normal. This treatment permits ambulatory patients to report early in the morning for treatment and in most instances they can be up that evening without ill effects. Consequently outpatients can be treated with safety, and be permitted to return to their home in the evening.

A course may consist of any number of treatments. Neymann states that the patient should be given them until he improves or becomes much worse. He has given as many as 40 treatments to the same patient and states he treated a case in which a remission occurred after the twenty-fifth treatment.

#### RESULTS OF DIATHERMY

Our experience has as yet been too meager and of too short duration to make any statement of opinion. The immediate results have in some instances

been very gratifying. One of the accompanying charts shows the effect of fever treatment with diathermy on the "lightning" pain of tabes dorsalis. This individual also expressed a great deal of symptomatic relief of what he had al-



Legend: The above graph represents the "lightning" pains and their response to diathermy fever in a case of tabes dorsalis. These are estimated by the patient himself on the basis of a very severe attack being 100 per cent. It is to be noted that following treatment the most severe attack was only 45 per cent and the attacks were very much less frequent and of very much less severity. The patient is an intelligent individual and his estimation of severity of the pains is reliable.

ways termed lumbago. One case of general paralysis of the deteriorating type which showed no improvement in a course of malaria, five months previously, and considerable arsenic and mercury since, has shown a little improvement at the end of the fifth treatment with diathermy.

There have been only a very few reports published of the results of treatment of neurosyphilis with diathermy. Neymann and Osborne<sup>7</sup> report twenty-five cases treated in which 64 per cent made a complete social adjustment, viz; they were able to maintain themselves outside an institution; 8 per cent made a partial adjustment and 7 patients were unimproved. They explain, however, that of the latter group five of the patients were deteriorated, one was of a depressed type, and one died of cerebral hemorrhage which was not directly or indirectly the result of treatment. Neymann in a later note<sup>8</sup> claims that with selected material, receiving long periods of fever and with many treatments, one should obtain 75 per cent remissions and a considerable per cent of the remainder improved.

Wilgus and Lurie<sup>11</sup> treated 97 cases of paresis by diathermy; 55 were much

improved, 17 slightly improved, and 23 unimproved. They simultaneously report on 31 patients treated with electric blankets; 10 per cent promptly showed marked improvement against 11 per cent with diathermy. Thirty-nine per cent made good improvement as compared with 44 per cent diathermy. King and Cocke<sup>12</sup> report 20 cases treated but they consider only 12 received a satisfactory series of treatments which they consider to be 8 to 20. The results were checked after a lapse of from 2 to 10 months and 8 patients showed definite improvement and 2 made clinical remissions. Eleven of the twelve showed a gain in weight and improvement in their general physical well-being.

In addition to treatment of neurosyphilis with diathermy its use is being tried in other conditions. There has been a recent report of beneficial results obtained in asthma.<sup>13</sup> Other reports<sup>14, 15</sup> state some rather spectacular results obtained by the fever treatment of chorea. A good many cases of multiple sclerosis have been reported improved by malaria though no report has come to the attention of the writers of the use of diathermy in this condition. We see no reason why it should not be effective, at least as much so as malaria.

#### SUMMARY

1. The production of a therapeutic fever by diathermy for treatment of general paralysis and tabes dorsalis seems to be the most safe, effective measure for the treatment of these conditions.

2. Its advantages lie in the ability to control the degree of fever, the time of treatment, the opportunity to combine medicinal treatment (arsenic and mercury) with it, and apparently a minimum amount of complications and low mortality.

3. It is also reported to be of value in asthma and chorea and probably would be as effective as any agent yet known in the treatment of multiple sclerosis.

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### Reactions of the Peritoneum

J. W. KENNEDY, M.D., Philadelphia, Pa.

Excerpts from an address before Shawnee County Medical Society Meeting in Topeka, Kansas, on October 5, 1931.

I have been asked since entering your hall this evening to say a few words in regard to some conditions which I feel are most neglected at this hour before taking up the topic for which I have been listed.

I will make some remarks concerning the high death rate and morbidity of a few common conditions which daily confront the profession.

#### DIABETES

Diabetes has not been conquered by any means, and the death rate in America is on the increase to a discouraging degree in spite of the great discovery of insulin. Very often a remedy does not fail because it is a feeble one but more often on account of its abuse, or lack of knowledge of its proper use. We must know more about the chemistry of our tissues and the physiology of our organs in order that we may prescribe the proper diet for the diabetic patient. The dietitian figures strongly in this condition and this should be the teaching. The

diabetic must live within the ability of his crippled pancreas to take care of the food he takes.

#### CANCER

Cancer, as you all know, is on the increase and in my experience very much so. I am seeing malignancy of the breast and uterus at a very much later period than I did twenty years ago. I feel that ninety per cent of the deaths from the malignant breast and uterus are due to personal neglect by someone, physician or patient.

The early removal of either organ gives excellent results. I do not endorse the treatment for malignancy of either organ at an early date by irradiation to the exclusion of surgery. It is further my opinion that irradiation will not be the last word in treatment of malignancy of the breast or uterus, nor will it be in any glandular organ. Surgery at an early date is most masterful.

I cannot, of course, go into discussion of this most important condition but do make an appeal for early diagnosis which must be made in breast and uterine conditions very much earlier than is being done. We must have regular health examinations of our patients. This will do most to reduce the death rate in malignancy.

#### THE OBSTETRICAL PATIENT

The obstetrical patient is most abused and we as a nation rank as low as the 18th in the great countries of the world in high mortality and morbidity. This is a disgrace that we should not long live under. Certainly rich America can afford to buy a cake of soap and this will take care of a great per cent of the deaths of the child-bearing woman.

Today it is a fact that the obstetrical patient is in the safest hands when in that of the clean practitioner of medicine and the labor conducted in her home. Each year sees a greater number of patients taken to hospitals for delivery and this has very greatly increased the number of forceful deliveries which will always add to mortality and morbidity. The abilities of the hospital predisposes the obstetrical patient to artificial delivery, too many forceful drugs, too

many anesthetics, too little intelligent watchful waiting. Even greater care must be taken in hospitals from the standpoint of cleanliness than in the private home on account of the infection which exists in the average hospital from other infected cases.

Prenatal care will prevent over ninety per cent of the toxemias in pregnancy which now account for a frightful and unnecessary mortality. Much is in our hands, why not use it?

#### CARDIORENAL CONDITIONS

The very high death rate from cardiorenal conditions is taking the lives of many of our most useful citizens at an early date. The luxury of the hour, too much automobile, too much eating, lack of any systematic exercise and too much concern about business to the exclusion of all health advice. The well-to-do man with the automobile finds his legs growing weaker and his body heavy, indeed he is a type of the malformed man we see on our streets daily in the great cities. It is impossible to take food or excessive drink from him with the results of a developed flabby heart and damaged kidneys.

I find in my abdominal surgery that after the age of forty-five every ten pounds above the average weight will give the surgeon from  $1\frac{1}{2}$  to 2 per cent mortality in abdominal surgery. I know no better test of the value of the heart and kidneys than the test of surgery. We must eat less and grow lighter after fifty if we care to live longer.

#### REACTIONS OF THE PERITONEUM

Regarding my topic of "Reactions of the Peritoneum," I chose this subject rather than that of peritonitis as I wanted to bring out the fact that the peritoneum is an organ with a function just as is the kidney, liver and so forth. We too often think of the peritoneum as a great sheet of membrane which covers the abdominal organs and lines the abdominal cavity and acts more as a ligament than any other function, whereas, the peritoneum probably has little, if any function as a ligament or support to the abdominal organs.

The properties of the peritoneum are

such as to lessen friction or irritation among the abdominal organs but the real function of the peritoneum is one of defense and is the surgeon's best friend.

We have been mostly concerned with our study of the peritoneum when it becomes peritonitic and have therefore neglected a study of its function from a physiological standpoint.

We have been taught that the peritoneum with a surface almost as great as that of the skin of the entire body, is studded with small openings called stomata which were supposed to be the real beginning of the lymphatic vessels and that it was through these openings that infection was taken up and carried on by the lymphatic vessels.

We do not feel that the lymphatics begin in these small openings and we contend that stomata as real openings do not in reality exist and further that the lymphatic vessels are probably not the true absorbents of the peritoneum but that the blood vessels are.

We also take the position that there is no one portion of the abdominal cavity richer in absorbents than any other and that the teaching opposing such has come from reasoning from a false premise. This being our view we have never endorsed the Fowler position in the treatment of peritonitic conditions. Followers of such teaching claim that the upper abdomen is richer in absorbents than the lower and thus the patient was set up in bed in order that infected fluids would gravitate to the pelvis.

We further contend that there is very little absorption takes place from the peritonitic peritoneum and that the peritonitic peritoneum can be manipulated with less degree of shock than the normal peritoneum. We take the ground that the peritonitic patient probably receives the final and fatal dose of toxins from other sources than absorption from the peritoneum such as partial and complete bowel obstructions, retroperitoneal infection, distal abscess and so forth.

In opposition to popular teaching of the hour that adhesions cannot be released in the peritonitic abdomen and that distal source of infection, namely,



appendix and so forth, must not be removed if adhesions are to be broken, we take the view that the distal source of infection must be removed, adhesions must be broken in order to release partial and a complete bowel obstruction, distal abscesses must be reached and properly drained.

In other words we operate for the complications of peritonitis and not the peritonitis per se and claim that if it were not for the complications which are superimposed upon the peritonitis such as partial and complete bowel obstructions, distal abscesses and so forth, that the peritoneum would most often win the fight.

I contend that the reactions of the peritoneum are defensive and not offensive and that all its reactions are defensive to any kind of irritation.

If the peritoneum is irritated, fibrin will begin to form in a few minutes and is probably completely formed in thirty minutes. This is all defensive.

Dr. Hertzler of your state has written the best book on the peritoneum of which I have any knowledge and my advice to you all is to read the same.

We further take the position that the peritoneum in all infections of the abdominal cavity is defensive in its very early reactions if it is not overwhelmed by a major dose of toxins, such as a frank perforation before there has been time for the physiological reaction of the peritoneum to take place and that the protective influence of the peritoneum permits the surgeon to do more thorough surgery than is done today.

The very rapid deaths we sometimes see in abdominal infections are due to an overwhelming dose of toxins or infections which filtrate through the peritoneum before there is any reaction of the same in the way of defense and the patient dies not from a peritonitis but from septicemia or blood infection. Indeed, the patient dies from the absence of peritonitis rather than a peritonitis in many cases.

In a sense I look upon the peritonitis or irritation of the peritoneum as a physiological process. The very early

fluid which is found in abdominal conditions incident to a perforated appendix is chemically sufficiently irritating to cause a reaction of the peritoneum which is defensive and prepares the abdominal cavity against bacterial invasion from the perforated appendix. This is an excellent example of nature's method of prophylaxis and defense.

It is our contention that the watchful waiting of the physiological surgeon of this date has accounted for the very high mortality in appendicitis in our country. Various statistics show that the mortality in America in appendicitis has increased from twenty to thirty per cent during the past fifteen years. I contend the death rate in appendicitis is even higher than the statistics even indicate, as a great many deaths in appendicitis are accredited to a complication of the condition such as post-operative pneumonia, bowel obstruction, distal abscesses and so forth, whereas all such deaths should be placed in the column of appendicitis.

It is our contention in appendicitis that operation should be done the first hour the patient is seen irrespective to its stage and that the appendix should be removed and the complications of the peritonitis as partial bowel obstruction, distal abscesses and so forth should be reached and properly dealt with.

If this position is taken by the profession it will move all the infected conditions of the abdominal cavity to an earlier operative hour with a much less death rate and certainly an improved morbidity and fewer post-operative complications. The watchful waiting of the physiological surgeon for a quiescent stage in the peritonitic abdomen due to a perforated appendix has been a disastrous blunder.

I am hopeful that the profession will soon see the light and will abandon this watchful waiting in the rapidly fatal lesions of the abdomen.

I have little time to take up drainage of the peritonitic patient. We use the coffer dam of gauze in all the bad cases and never use tubal drainage. The slides which I will show illustrate our method

of drainage and vaginal hysterectomy for malignancy of the uterus are taken from my monograph entitled "Practical Surgery of the Joseph Price Hospital."

Drainage is one of the most difficult subjects to teach and only experience will give one confidence and ability to manage these difficult cases. The peritonitic patient must be properly drained and drainage is not simply placing some means for drainage within the abdominal cavity. Each adhesion broken is drainage, every gangrenous structure removed is drainage, each organ elevated and held from a dependent and infected area is drainage and the very foundation of drainage is removal of the distal and infecting source. These conditions cannot be met or dealt with with the ordinary drainage tube.

The coffer dam of gauze used in the peritonitic abdomen has its greatest function in elevating structures keeping the infected bowel from prolapsing into the dependent infected areas and there becoming a post-operative bowel obstruction. The elevation of the structures which are held in place by the coffer dam also much improves their circulation which encourages early peristalsis. All of our peritonitic patients are placed on their right side or rather a right Sims' position which will empty the pelvis. Gravity means little in the peritonitic patient and all drainage is very local after the first four or five hours.

—R—

### **Acne Vulgaris and its Treatment**

C. OMER WEST, M.D., Kansas City, Kan.

Read before the Wyandotte County Medical Society.

The pimply faced boy or girl of adolescence to young adult life is a familiar sight to us. It is so familiar and wide spread that the laity recognize and diagnose for us. We are then confronted with two problems. First, is the condition a simple acne vulgaris and second, what service can we be to this individual, who feels severely his handicap before the ever critical public eye. The youth, whether in high school, college, business or commercial life must be served. The social barrier that is so often established is probably felt more keenly at this par-

ticular period of life and means much to the present and future happiness of the individual. We as doctors must give this economic and social problem more serious consideration than the old classical medical injunction, "Fear the Lord and keep your bowels open."

This subject has been chosen this evening because of its particular interest to all practitioners of medicine. And I shall not attempt to give all the minute details of classification, etiology or pathology, but shall confine this paper to some of the practical points in the diagnosis and treatment of acne vulgaris, for each fall with the beginning of school and social activities a new group of patients comes to us asking for help.

For convenience of description several clinical types of the disease are recognized. Acne simplex in which the lesions are superficial, or in which the lesions are little more than comedones, or in which the lesions are papular, or pustular or papulo-pustular, or acne atrophica, depending upon the amount, the degree, the duration of the infection and the cicatricial tissue present. This varies considerably in different individuals. No two patients present the same degree of the disease. Acne Rosacea in which the flush areas of the face and nose are involved is probably due to a constant congestion of the sebaceous glands of those areas and sometimes has the lesions of simple acne. Acne varioliformis is characterized by reddish or brownish papulo-pustular lesions of the follicles which leave variola-like scars. Keloid and drug acnes need only be mentioned. However, there are several drugs which produce a pseudo-acne either from internal ingestion or from external application such as tar, iodides, etc. In passing, two other types as described by the French should be mentioned, "Acne excoriee jeun filles" of neurotic young girls and "Acne Meuntonniere" of young unmarried women, starting out as a simple acne and progressing gets worse until the skin takes on a dirty, dingy, greasy, large pores and scalliness appearance with hypertrichosis of the lip and chin and heavy terminal hairs.



The cause of acne has never been definitely established. Whether the disease is due to the acne bacillus of Unna or the micro-bacillus of Seborrhea of Sabourand or the bacillus acnes of Gilerist, the fact still remains that these organisms have never fulfilled Koch's postulates and treatment with acne vaccine alone has not been of therapeutic success. It is my opinion and the opinion of others that acne is a combination of happenings.

As acne is primarily a disease of adolescence, the endocrine system is at this time going through some very definite changes. The pilosebaceous system seems to be hyperactive, filling the sebaceous glands and ducts with oily, cellular detritus. This creates a very fine culture medium for any organisms that might be on the skin or in the pores. Whether it is the micro-organisms' presence in the sebaceous material that sets up a toxin or produces a mechanical effect, which in turn causes a low grade keratinization along the wall of the pore, or whether the sebaceous material and cellular debris are hosts to the numerous micro-organisms, the result is the same. A plug or comedone is formed in the pore and the severity of the acne depends upon the number of pathogenic bacteria behind this plug and the resistance of the individual to the particular pathogenic organism. The organisms are always present as a stained smear made from the contents of a comedone or pustule will readily show under the microscope. Many organisms have been isolated from time to time. Varney and Clerke found a diplococcus in persistent-like lesions in adults. A vaccine made from this organism was also found curative. A similar organism was found by Dennie and Sutton in a case of folliculitis. Schamberg and others have tried to prove the relationship of various eruptions of acne by complement fixation tests. Some authorities think that the presence of small amounts of iodine play a part, even the small amounts found in sea food, iodized salt, etc. Duke has gotten some very interesting results from blood sugar studies. Myers has gotten some fine cures resulting from

blood sugar and blood chlorides studies.

The presence of foci of infection, whether in the form of auto-intoxication from gastro-intestinal leukomains and toxemias, faulty metabolism or chronic nutritional disturbances, or infected teeth, tonsils, sinuses, has long been known to aggravate and increase the severity of the acne.

The diagnosis is fairly easy, although some points on differential diagnosis should be stressed. A differential point between sycosis vulgaris and acne vulgaris is rather easily made. The presence of the latter on the non-hairy surfaces makes the diagnosis. The pustules of acne can scarcely be confounded with those of any other infection, except with the lesions of smallpox, bromide and iodine eruptions. The prodromal symptoms and presence of lesions on palms and soles should not let anyone confuse smallpox and acne vulgaris. However, it has been reported; therefore, it is mentioned here. In drug eruptions the comedones are absent, lesions occur on any part of the body and are generally a bright red in color, while the fluid content of the pustule is rather thinner. Drug eruptions appear at any period of life while acne vulgaris is essentially a disease of puberty or young adult life.

The papulo-pustular or pustular syphilides may attack any part of the body and are not generally grouped, which is never the case with the pustules of acne. The color of the pustule is also of very great importance in differentiating acne vulgaris from syphilides, the latter possessing an areola of raw ham color and the presence of lymph glands, mucuous patches and the serological reaction should not confuse.

Acne patients should have a thorough physical examination with particular attention to any physical defects or foci of infection. It is surprising how often cases of apparently severe acne disappear after tonsillectomy or extraction of an infected tooth. The digestive tract must be investigated, for often we find gastric disturbances, and in girls, constipation is a very common thing. Anemia is not uncommon in these choreiform individuals. In these cases iron and ar-

senic are indicated and in the most cases some laxative, preferably of the senna or cascara group. A good mixture is I. Q. and S. with cascara, or rhubarb and soda, or Fowler's solution, or Bland's pills with iron and arsenic, or Afenil, a calcium chloride-urea preparation.

Chapman is of the opinion that the average acne diet is grotesque and unnecessary. It is my experience that the diet is very important. I grant it is not curative in itself, but the eliminating from the diet milk, chocolate, pork, cheese, fried foods, sweets and such foods as increase the activity of the sebaceous system, makes an acne respond more readily. Mitchell found in his series of 123 cases that 51 per cent of those who followed the diet prescribed got permanent results and that relapses were more frequent when the diet was not followed. From the various staphylococcus and stock acne vaccines I have seen no apparent improvement or cure. However, the size of the pustule may be somewhat reduced. The same effect, I am sure, could be obtained with boiled milk, typhoid vaccine, colon vaccine or any foreign protein.

The following local treatment of this usual picture of oily skin, sprinkled with comedones, papules and pustules: A hyperkeratosis of more or less degree about the lesions with a distention of the sebaceous ducts, which are potential comedones, gives satisfactory results in most cases. And do not overlook an old seborrheic scalp and let it go untreated. The scalp must be treated also.

The detritus must be removed with some strong alkaline soap and water. It is my experience that tincture of green soap and cool water are more effective than the so-called medicated soap. This followed by the application of some keratolytic, either in the form of a paste or lotion. The classic lotio alba is often used to advantage. A 10 per cent or 15 per cent resorcin paste is good, or Kumfeld's lotion. Fisher of Cleveland suggests alternating first a bottle of Kumfeld's lotion, then a bottle of lotio alba. The keratolytic effect is not so severe.

The opening of the pustules and the

removal of the comedones is very important and should be done by the doctor—never entrusted to the patient. Their early removal lessens the probability of postule formation and also lessens cicatricial tissue formation. I have found a No. 11 Bard-Parker blade very convenient. The cutting edge makes a clean cut and after removal of the pus the incision heals without scarring. A comedon expressor with a very small opening is preferred as it does not injure surrounding tissue. It is best to remove as many comedones as possible as they are potential pustules. The use of an astringent following the removal of pustules and comedones, such as 1 per cent salicylic acid with 5 per cent boric acid in glycerine and alcohol or aluminum acetate in alcohol or rubbing alcohol, reduces the inflammation that is present.

The past summer I saw some beautiful results the French and Germans were getting with a high pressure douche. The pustules were incised and comedones were carefully expressed. The douche was then most profusely applied until bleeding ceased and a marked erythema was produced.

The use of the ultra violet ray should be guarded in the treatment of acne. Stokes thinks it harmful. The exfoliative effect that is obtained from the ultra violet ray can be readily obtained from a resorcin paste. It seems to me that the constant stimulation is undesired in acne treatment. In girls and young women this produces hypertrichosis, a much more difficult condition than acne to treat. Our cases must be carefully selected if we are to use the ultra violet ray.

The x-ray, although not a universal panacea, gives us the most valuable remedy in the treatment of this disease. Ormsby, Howard Fox, McKee, Hazen, Sutton and others think it the best treatment, because it is the most rational. The rays diminish the activity of the subaceous gland and reduce the size of the follicle and the pores become smaller and the texture of the skin is improved. The dose must be extremely accurate as pointed out by McKee, Wise, Buschke,



Max Joseph, Kirby-Smith and others and is best given by one who is accustomed to observing the effect of *x*-ray on the skin. In using this treatment one must not give over one skin unit a month, and cautious operators are giving from one-half to two-thirds skin unit per month, always watching for any sign or symptom that may lead to a permanent injury.

#### SUMMARY

1. Acne presents an economic and social handicap worthy of our careful consideration.

2. The etiologic factor is not known in acne, but it is probably a series of happenings.

3. The diagnosis is quite easy in most cases.

4. The simpler methods of treatment are worth trying in mild cases.

5. The *x*-ray, although not a panacea, is at present the most successful method of treatment.

#### —R— Exophthalmic Goitre

J. D. COLT, JR., M.D., Manhattan

Read before the Riley County Medical Society at Manhattan,  
October 12, 1931.

In 1825 Caleb H. Parry wrote a description of eight cases in which he referred to enlargement of the thyroid gland accompanied by enlargement and palpitation of the heart. In the first case seen by him in 1786 he also mentions the instance of exophthalmos—in his own words—"The eyes protruded from their sockets, and the countenance exhibited an appearance of agitation and distress, especially in any muscular movement." The Italians claim that Flajani first described the disease in 1800. But Moebius states that his account was meager and inaccurate and cannot compare with that of Parry. Graves described the disease in 1835 and Basedow in 1840.

The disease is described as being characterized by enlargement of the thyroid gland, exophthalmos, tachycardia and tremor associated with a perverted or hyperactive secretion.

As regards etiology, Sattler collected 3477 cases from the literature and found

that only 184 were below the age of 16. Also that 5.4 females to every 1 male was the ratio of sex. However, another group collected from England and America shows the ratio of females to males to be 20 to 1. Also there seems to be a strong family predisposition, frequently 5 or 6 members of one family being afflicted. Fright is a rare cause. Various depressive influences such as worry, nervous strain, disappointment in love, illnesses, mental shocks, financial worries, etc., undoubtedly have an important influence in precipitating the condition which was under normal circumstances being held in balance. Crile's theory of suprarenal disease undoubtedly has some bearing.

The anatomical changes in the gland, of a true case of exophthalmic goitre, are as a rule fairly constant, the most noteworthy being that of hyperplasia of the gland, with enlarged and newly formed follicles, extensive proliferation of the endothelium and marked papillary extension into the acini accompanied by a lessening of the colloid material. Also an increase in the lymphoid tissue of the gland stroma.

The diagnosis is made with little difficulty in all but the border line cases and in these it is well to keep the patient under observation and to run repeated metabolic readings, until the patient has herself proved or disproved the diagnosis.

Some authorities recognize a chronic form of Graves' disease but I believe that there can exist no such condition. Rather I believe that we have in some instances the disease appearing in acute stages with a spontaneous cure which may last for a short period or even be permanent. Some of the ravages of the disease such as the exophthalmos, or the tachycardia may persist, even though the gland has ceased to be active and the patient be perfectly healthy in every respect. It is my belief that it is these cases that are classed by some authors as chronic cases. The patient's history is of but little importance due to the relative acuteness of the disease, for rarely have any of the symptoms been

present for more than six months and most usually for one or two. However, a history which shows other members of the family affected is of interest and probably some importance. Also a history of a similar acute attack at some previous date with a spontaneous cure is quite important. In my personal opinion the eliciting from the patient a history of some recent mental shock or worry or strain should receive much more place in the literature than it occupies. However quite commonly it is impossible to get the patient to admit the existence of any such thing until after operation and he or she is on the road to recovery. In my own brief experience I have never had a case that such a condition was not admitted by the patient at some stage during my contact with him. I do not mean to give the impression that I believe this to be the sole etiologic factor, but I do believe it to be an important one.

There are four cardinal symptoms of exophthalmic goitre, stated in their order of importance as follows:

First, tachycardia. The pulse rate ranges from 95 to 160 or even higher, irregularity is uncommon until near death. Other vascular changes should be noted such as pulsating carotids, visible capillary pulse. Vascular erythema is common, the face and neck are flushed and even widespread erythema over other parts of the body. On auscultation murmurs may be heard over the entire heart and especially a systolic murmur at the apex. The heart may be enlarged, either dilated or hypertrophied or both. One must of course be sure in his own mind that these symptoms are not purely cardiac in origin and that the tachycardia if present alone without other cardiac findings is not due to some other pathology or purely neurotic in origin.

Second, exophthalmos. This usually follows rather than precedes the vascular disturbance. It may be unilateral but is usually bilateral, and gives a characteristic facial expression, that of staring or fixed fright. This is caused by the protrusion of the eyeballs, and more particularly by retraction of the lids expos-

ing the sclera above and below the cornea. The protrusion may become so great that the eyeballs are dislocated from their sockets. In such cases a portion of the orbital floor may be removed in order that they may recede. Also corneal ulcers are quite common, due to the inability of the lids to cover and protect them. This can be avoided by excoriating the lid margins and suturing them together so that they will adhere. Changes in the optic nerve and pupil are rare, the vision is usually not disturbed. Pulsation of the retinal arteries is common. There are certain so-called eye signs which are of questionable importance due to their indefiniteness. They are as follows: Graefe's sign, inability of the upper lid to follow the eyeball in its downward course. Stellwag's sign, widening of the palpebral aperture. Moebius' sign, inability of the two eyes to converge.

Third, tumor or enlargement of the thyroid gland. This may be entirely absent. It may be uniform or in only one lobe. The gland is usually firm but elastic. Rarely are pressure signs present. The vessels over the gland are usually dilated and the whole gland may be seen to pulsate. A thrill may be felt on palpation while on auscultation a loud systolic murmur may be heard and frequently a double murmur which is almost pathognomonic. It is quite important before examining the gland to ascertain whether or not the patient has been given iodine. Some of these patients do not respond to iodine, some are apparently made worse, but for those that do respond (and this is the case in most instances) the acini of the gland are stretched out, the papillae disappear and colloid material reappears in the acini, also the endothelium really atrophies as does the stroma, leaving a much more firm and usually nodular gland. The gland can be easily palpated and especially its consistency determined by placing the fingers of the left hand on the larynx just in front of the sternocleidomastoid and dislocating the larynx to the left side. Place the fingers of the right hand back of the left sternocleidomastoid muscle and the thumb in front



of that muscle, have the patient swallow and as the gland, which is pushed away from the trachea, passes up and down the left lobe is readily felt between the thumb and fingers of the right hand. The procedure can be reversed for the right lobe.

Fourth, tremor. It is involuntary, is usually fine, about eight to the second, but must not be confused with the extremely fine tremor of the purely nervous or neurotic patient. A tremor found in the foot, especially the anterior or toe portion, will help to rule out the nervous origin.

Other symptoms of less diagnostic importance due to their variability of appearance are as follows: Anemia and loss of weight with normal or increased appetite, slight fever; gastro-intestinal symptoms; such as vomiting and diarrhea; hot flashes and profuse sweating; pruritus, pigmentary changes either patchy or general; changes in disposition, such as irritability of temper or mental depression or even severe mania resulting in death; muscular weakness and especially in the muscles of the lower extremities in which difficulty in climbing stairs is frequently expressed.

Joffroy's sign, which is an inability of the patient to wrinkle his forehead when looking up is due to muscle weakness. Albuminuria and glycosuria may be complications or even true diabetes may result.

I have purposely left the metabolic rate for the last because in my opinion when properly handled and intelligently interpreted it is invaluable, but when not, it may be the cause of serious error. No patient without sufficient clinical signs and symptoms should be convicted and condemned to operation, regardless of the metabolic rate. Also quite frequently the first reading is high, due to the patient's excitement or apprehension. It is not uncommon to have a patient with a reading of +20 and two days later the reading be +10 and in two more days the reading be zero or even a slight minus, and all this without treatment. So that in border-line cases, at least, one should never be satisfied with a single reading.

As regards treatment, little need be said as it is unquestionably purely surgical. Where possible the patient should be thoroughly prepared for the operation by complete rest, sedatives, digitalis or quinidine when indicated, and Lugol's solution. Some of these patients as before stated do not respond at all to Lugol's solution and as a matter of fact to any treatment and must be operated at once. It is frequently advisable to remove only a portion of the gland and finish the operation at some subsequent date. Ligation of the superior and inferior vessels is not as popular as it was a few years ago. In still other cases a patient may become progressively worse or even thrown into a crisis by the use of Lugol's solution, however, if the solution is started cautiously in small doses this is of little importance and rapidly clears up.

The question is frequently asked, "How much gland do you remove?" The answer should be, "Just the right amount." One cannot have a set rule to follow due to the many factors which should be considered. One should take into account continued loss of weight in spite of forced feeding, continued high metabolic rate despite rest and other treatment, the patient's response to Lugol's solution which causes the acini to be filled with colloid material and the endothelium to atrophy, thereby rendering the gland less toxic, the age of the patient—children and elderly people requiring the removal of much less gland than one in middle life. One does not wish to produce a case of myxedema and have a patient be required to take thyroid extract the rest of his life. On the other hand there are only two things which enter into the failure of surgical cure, provided the patient survives the operation. One is faulty diagnosis, I mean operating a pure neurotic, and the other is the failure to remove sufficient amount of the gland. Unquestionably the subtotal thyroidectomy is the operation of choice. At the present time the percentage of five-year cures in various large clinics of all cases treated surgically is reported variously as ranging from 70 to 90. One must, however, re-

member the not uncommon incidence of spontaneous cure and we can never be sure exactly how many of these cases would not have gotten well without the thyroidectomy having been performed. We do know that they are greatly in the minority and that the risk is far too great to warrant our even acquainting the patient with this possibility.

In conclusion I wish to say that Graves' disease is a condition which is acute, not chronic, is a disease essentially of middle life, rather easily diagnosed, that its treatment is purely surgical and that the prognosis is essentially dependent on an early diagnosis and intelligent surgical treatment.

—R—

### TUBERCULOSIS ABSTRACTS

As the mariner trims his sails to the weather, so the physician adjusts his therapeutic measures according to the pathological course of the disease. While general principles must guide us in the treatment of tuberculosis, no formula applicable to every case can be devised. If one understands the sequence of events following infection by bacillus tuberculosis, the response of the tissues and the natural processes of healing, treatment becomes more rational and adaptable to the immediate need. The most we can do in our present state of knowledge is to support the natural tendencies of the body to overcome the disease. M. Jaquerod of Leysin, Switzerland, discusses the natural processes of healing in pulmonary tuberculosis in *TUBERCLE* of July, 1931. Abstracts of the article follow.

#### HEALING PROCESSES IN TUBERCULOSIS

Radiography enables us to demonstrate the anatomical changes taking place in tuberculosis during life and ending in cure with a precision which is almost equivalent to post-mortem findings. Pulmonary tuberculosis was formerly considered as a chronic ailment from the very beginning. We now know that the disease passes through various stages before it arrives at a condition of chronicity. Virchow taught that all pulmonary tuberculosis lesions necessarily originated from miliary tubercles, solitary or

conglomerate, and that these were the only specific lesions produced by the tubercle bacillus. Congestive or simple inflammatory changes in the region of chronic foci had been observed, but these changes were regarded merely as neighboring reactions without clinical significance. Today, we know that these lesions *are* tuberculosis, that they preceded the chronic lesions, and that during a period of a year or more may exist alone and constitute the whole of the disease.

#### INFLAMMATORY NATURE OF TUBERCULOSIS

Wilson-Fox and Green, two English pathologists, recognized the pneumonic nature of the lesions (in 1873-74) before the tubercle bacillus had been discovered. Thaon, in France, (1885) found that the tubercle bacillus was really the sole cause of tuberculous pneumonic lesions. Only ten years ago, the distinction between miliary (productive) and inflammatory (exudative) lesions was recognized in Germany.

This conception of the pneumonic or inflammatory nature of tuberculous lesions at their origin is of practical importance. As long as the lesions are in the inflammatory stage, they may heal by resolution comparable in every way to the resolution of the lesions in acute pneumonia, except that the process of regression lasts several months instead of one or two weeks. In the pneumonic stage, the bacilli are not yet solidly implanted in the tissues as in miliary type lesions but are still on the surface of the mucous membrane between the epithelial cells in the alveoli and the inter-cellular spaces. Consequently, their destruction and elimination by phagocytes or other means is rendered much easier. Only when these lesions do not heal do the manifold lesions of chronic tuberculosis develop, and these heal with greater difficulty. Indeed, when that has occurred, healing is possible only by the complicated processes of fibrosis and pulmonary retraction.

#### TIME ELEMENT IMPORTANT

The question, "How recent is the disease?" (that is to say, the lesion) has acquired a high clinical importance from the standpoint of prognosis and treat-



ment. In recent pulmonary lesions, two types must be distinguished. The first type is encountered chiefly in childhood in an individual not previously infected and, therefore, non-allergic. If in this case the infection is slight, tuberculin sensitiveness will be produced but no actual disease capable of giving rise to clinical symptoms of obvious anatomical lesions. This the author calls abortive tuberculosis. But if the infection is more serious, actual disease may occur. The lesion is of relatively slight importance and it consists usually of an infiltration in the neighborhood of the point of inoculation with swelling of the lymph nodes at the hilum. These lesions are recognized by radiography. (In the United States, this type is designated as the childhood type of tuberculosis.) They regress slowly and heal by resolution, leaving no trace other than calcification in the hilum glands (tracheobronchial nodes). When the infection is too massive or if the resistance is not sufficiently good, the disease may continue to develop past the non-allergic phase and

the lesions may soften or generalize.

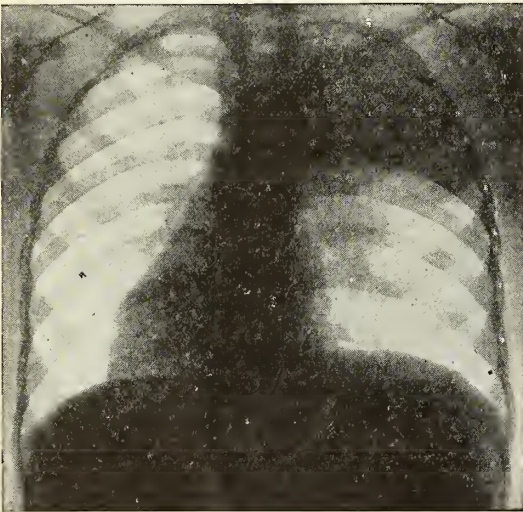
When bacillary infection takes place in an individual already sensitized by tubercle bacilli (reinfection), the pulmonary reactions may be much more intense, while the reaction of the pulmonary lymph nodes is almost nil. (In the United States, this form is called adult type of tuberculosis.) The inflammatory reaction may go so far as necrosis of parts of the lung, ending in cavity formation. But this cavity is quite different from that of chronic tuberculosis. Its walls are not formed by a well organized pyogenic membrane but by simple inflammatory tissue; and for that reason may heal by resolution without leaving any apparent fibrous scar. The cavity is, therefore, not always the final and most serious lesion of pulmonary tuberculosis.

The early forms of tuberculosis described are capable of cure by resolution; the chronic form only by the complicated processes of fibrous transformation and natural or artificial organic modification.

#### PNEUMOTHORAX FAVORED

The author is of the opinion that pneumothorax treatment is indicated in almost all cases of pulmonary tuberculosis as soon as diagnosed. Others consider that they are justified in waiting a certain time while placing the patient in the best possible condition for the cicatrization of his lesions. In favor of intervention, the author mentions the physician's preference for a method which enables him to play an active part and at the same time to verify speedily the results of his intervention.

He also feels that as the first two or early forms always exist before the third, it is in these early stages that the bacillus can be most easily attacked, and, therefore, the possibilities of finding a remedy, of checking and curing pulmonary tuberculosis are most promising if directed to the early types. He thinks, therefore, that the search for a cure should be directed to some remedy capable of facilitating the process of resolution.—*The Natural Processes of Healing in Pulmonary Tuberculosis*, M. Jaquero, *Tubercle*, July, 1931.



X-ray plate, chest of boy, aged 8. Consolidation of right upper lobe with marked enlargement of lymph nodes from fourth to eighth posterior ribs. Physical signs: left, normal; right limited expansion, dullness, bronchial breathing, and rales. Tuberculin test positive. Temperature up to 100.4° during dispensary observation. Twelve per cent underweight. Cough marked, sputum positive in April to animal inoculation; in May, to routine examination.

Twenty months later, the upper lobe had contracted somewhat and was less opaque; fresh infiltration had appeared in the middle lobe; the lymph nodes had diminished slightly and were beginning to calcify. In ten months more, both the upper and middle lobes cleared considerably and the outlook is now hopeful. (From "Childhood Type of Tuberculosis," Chadwick and McPhedran, *Nat. Tuberc. Assn.*)

## THERAPEUTIC RESEARCH

The ideal of therapy is, of course, a practicable bactericide. Meanwhile, as we await this, it would appear that a study of structure would suggest the following paths as worthy of exploration:

1. That directed toward the discovery of a medium or method to accelerate and heighten cellular proliferation and fibrosis. Dangers lie in enhancing the tendency of tissues to tumor-formation.

2. That toward a medium to neutralize the intoxicating products of the allergic reaction. If it were nonspecific, it might prove a veritable boon in many infectious diseases.

3. That toward a medium to neutralize the poisonous products that proceed from tuberculous foci. For reasons frequently expressed, it is believed that these are not specific, but are substances that result from the death and disintegration of the cellular components of foci. Can a substance antagonistic to them be found? Or a substance that would so act upon the body as to ward off their physiological effects?—*The Evolution of Tubercle, Allen K. Krause.*

### Treatment of Poliomyelitis

John Ruhrah, Baltimore (J.A.M.A., Oct. 24, 1931), summarizes the treatment of poliomyelitis thus: The early treatment should be by the injection of convalescent serum or that taken from patients who at some time have had the disease. Stocks of this serum should be kept on hand by health departments, hospitals and similar institutions. Divided into proper doses, placed in small bottles and dried, it keeps practically indefinitely, and all that is needed is to add sterile water to it to make up the required amount. During the febrile period all efforts at treatment should aim to make the patient as comfortable as possible, using the technic which would be applied to any acute infection. Rest is essential and the late results are best when that is insisted on, whether the case is mild or severe. The patient should be kept in bed as long as there is pain, but during this period it may be advisable to lift him to another bed or comfortable chair while the bed is

aired or made. This change is often most grateful to the patient and if it can be done without undue pain or fatigue apparently does no harm. When the legs are affected the patient should be kept either in or on the bed for at least six months and longer in many cases. The treatment of poliomyelitis after the febrile period consists in rest, relief of pain, prevention of deformity, massage and exercise, which may be passive, assisted, voluntary, carried out under water, but always supervised. Failure to prevent deformities due to contraction of the muscles, tendons and fasciae is the greatest sin of omission. The contractions take place very quickly; a week or ten days' neglect may result in a foot drop which may cost the patient much pain and the physician much trouble. No patient with extensive paralysis escapes without contractions, but they should be kept at a minimum by care and treatment. If they occur they should be treated as early as severe pain permits.

### Familial Epidemic of Acute Diffuse Glomerulonephritis: Relation to Pathogenesis of Disease

A Carlton Ernstone and George P. Robb, Boston (J.A.M.A., Nov. 7, 1931), record a familial epidemic of acute diffuse glomerulonephritis not due to scarlatina. Eight of ten children successively developed an acute infection of the upper respiratory tract and, in six, symptoms and signs of acute diffuse glomerulonephritis appeared during convalescence. The interval elapsing in each case between the onset of the acute infection and the appearance of nephritis supports the hypothesis that acute diffuse glomerulonephritis results from the development of a state of hypersensitiveness to the primary infection. Although cultures from the throats of all subjects yielded streptococci, absolute proof as to the precise identity of the organism causing the primary infection could not be obtained.

Nurse (going off duty): "Is there anything else you wish, sir?"

Patient: "Yes, kiss me good night."

Nurse: "I'll send in an orderly—he does the dirty work."



# THE JOURNAL

of the

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### CARRYING ON

Our members doubtless already have learned, through the public press, or otherwise, of the death of our beloved editor, Dr. William E. McVey. An appropriate editorial tribute, by Dr. W. C. Menninger, will be found below, as well as a tribute from his secretary who has been associated with him for several years.

It is hard to realize that the man who for so long has been our spokesman in these columns and elsewhere, wherever we have needed a champion, has passed from our midst forever. We mourn his death, not only as a grievous personal loss, but as a loss to the great cause for which he worked so long and faithfully. He had acquired great skill as a medical writer. As an example of this skill and of his clearness of expression, all of our readers should refer to one of his very last editorials, in our October issue, under the caption "The Outlook for Medicine." Every physician in Kansas should not only read this again and again, but preserve it as a brilliant piece of editorial workmanship.

His work in the founding of our magazine, *Folks*, was an incomplete fulfillment of his dream to put the people and

the medical profession into a relation of better understanding. He felt that the public could be trusted to put quackery in the discard if they only became aware of what scientific medicine really means. *Folks* was to be the medium of that expression. Shall we not, with renewed energy, put our shoulders to the task of consummating this dream of Dr. McVey, and make *Folks* a worthy monument to his memory?

The writer of these lines, whose name at the head of this page temporarily supplants that of our lamented friend, has been appointed to "carry on," somehow, till the Council meets in January, at which time a new editor will be elected. It is a hard job, and our readers are asked to exercise their patience and forbearance towards one who is called, abruptly, to perform an unaccustomed and difficult task. The master is dead, but his work must be carried on.

### AN APPRECIATION OF DR. MCVEY

The guiding hand and the light of this Journal was snuffed out late Wednesday afternoon, October twenty-first. William Edley McVey, our editor, died in Christ's Hospital from gastric hemorrhage and a worn out heart after an apparent illness of only five days.

It is impossible to think of Mac as gone. It is so much easier to think of him being away for a little while, for in reality he will live on forever. His written word will stand forever, and there is much that he has contributed; his influence will carry on as long as his host of followers can carry; his affection will ever be cherished by those fortunates who received it; and his memory will march on so long as books stand and men study the makers of history.

No man in the history of the Kansas Medical Society has contributed as much to it as did Dr. McVey. No man has







ever done more to place the medical profession in its right light in the eyes of the Kansas public. No man has ever done more to foster ideals and ethical standards in our Society. And no one has nearly equalled his record with his pen, both for the profession and in the name of the profession to the public. And all of this, Mac did with a rare grace, an unstinting zeal, and an impressive sincerity.

Following his graduation in 1888, he began practicing medicine in Topeka. His career with medical publications began the following year. He organized a stock company and began publishing the Kansas Medical Journal. He served as business manager until 1894, when he assumed the job of editor as well as manager. He continued in this capacity until 1899 when he undertook the publication of a larger journal, the Medical Monograph, which continued for one year. During the years from 1889 to 1913, he was connected with the Kansas Medical College, first as a lecturer, then as professor of physical diagnosis and disease of the heart, later as professor of laryngology, rhinology, and diseases of the chest, and for years was secretary to the college, and finally became dean of the school in 1909. He became editor of the Journal of the Kansas Medical Society in 1914 and at the annual meeting of the Society last spring in Manhattan, was elected also to be the editor of the health publication "Folks." He also served the Kansas Medical Society as corresponding secretary in 1895, recording secretary from 1896 until 1903, and then was elected president that year.

Our State Medical Journal, as Dr. McVey has built it up, is recognized as one of the leading state medical publications. It has received very favorable mention from men who know. And all the credit

goes to the editor. None of us on the sidelines can appreciate the thankless job that has been his. We have never known the worries that confronted him nor the obstacles he has overcome. Few have been the letters or words of appreciation or praise. And yet regardless of our thoughtlessness and the absence of our kind words, William E. McVey carried on magnificently as a devoted servant to the profession and a student of medicine.

But many of us will miss most his friendship. And very few physicians in the state have a wider circle of friends. His long intensive activity in the Medical Society and his intimate contact with the Kansas Medical College have provided him with contacts, personal and intimate, with men in nearly every county in the state and hosts outside of it. His friendship was not the flip, hale and hearty good fellow sort, but a deep, permanent, solid type that distinguishes men from hand-shakers.

Dr. McVey was a student. He made it a point to keep himself well informed, particularly in the field of medicine. He was a regular and faithful attendant of medical meetings, both local and national. He rarely discussed papers, but when he spoke, men opened their ears, for his remarks were always pertinent and instructive.

The death of Dr. McVey removes from our midst a great builder, a distinguished student, a beloved physician and a valued friend. To his old associates especially, his loss adds to the sad changes of the passing years but his life has enriched ours beyond measure.

WILLIAM C. MENNINGER, M.D.

A TRIBUTE BY DR. McVEY'S SECRETARY

A staunch and loyal friend, a sympathetic and understanding physician; a kind, gentle, congenial, patient and for-



bearing "chief" has passed on. He leaves a vacant place in this heart that never can be filled. To have had the opportunity of working with Dr. McVey and being a recipient of the vast knowledge he had of all things in general, which he was ever ready to share with anyone who was willing to listen, was a rare privilege that comes to few.

It is needless for me to say he worked for the good and best interests of the Society at all times. However, his untiring efforts in its behalf will probably never be fully appreciated. It is hard to carry on when one constantly listens and waits for a familiar footstep and a usual "good morning, what's doing today," but I am sure it would be his wish to continue the work that has been started and in which he was so intensely interested, and with the cooperation of every member of the Society it can be done.

The privilege of having been associated with Dr. McVey for several years was mine and one for which I will never cease to be thankful.

RUTH CARLSON,  
Secretary to the late Dr. McVey.

#### THE COUNTY MEDICAL SOCIETY

Many of us do not seem to appreciate the fact that the County Medical Society is the very foundation of organized medicine.

We feel that attendance at its meetings is not at all important. Many of us attend only if some celebrity is to appear on the program; we are touchy and refuse to attend if some one hurts our feelings; or if the society isn't run to suit us.

Only a small per cent are really active and any excuse is good enough to keep us away, and we are no better members of the State Society.

It is believed by some physicians who have had much experience with the medi-

cal profession throughout the United States, that the county society must do more than put on attractive scientific programs; they must get closer to the people.

Each county society should have an active committee on economics. Many think the business side of medical practice will never be satisfactorily handled by the present medical organizations, but an entirely new one should be formed for this purpose. We do not think this is necessary; if physicians cannot or will not see the trend of the times, and through a committee on public relations and a committee on economics, bring about necessary reforms, then no new medical organization would function.

We are too prone to say, "what's the use?" It is true, it is no use, for a few physicians to attempt the reformation, but if our 1500 members in Kansas would take as much interest in the above named committees for a period of five years, as they do in the Rotary or Kiwanis, or a lot of other things, our State Society would make history.

Sedgwick County employed a full time executive secretary last summer, and I understand he is very satisfactory. Other large county societies could well keep an eye on Sedgwick County, with a view to adopting her methods.

We suggest county societies invite a banker to address a society meeting; also a newspaper man, an advertising man, a farmer, a merchant and lawyer. When the invitation is extended, acquaint the speaker with some of our most pressing problems, and perhaps he might give some good and timely advice; ask him for criticism as well as advice, individually and as an organization.

Good sound advice from our leading local banker and others would certainly do us no harm and might give the public

a larger appreciation of some of our difficulties. Is it not worth trying?

E. C. DUNCAN, M.D.

#### THE PRE-SCHOOL CHILD

The chief purposes of the White House Conference on Child Health and Protection were to study the present status of child health and well being in this country; to determine what was being done and finally to make recommendations as to what should be done.

One of the first projects undertaken by the Medical Section under the chairmanship of Dr. Philip Van Ingen was a study of how extensively preventive medicine was being applied for the benefit of the pre-school group, or those children under six years of age. During the period from June, 1930, to February, 1931, a survey was conducted in 156 cities and 597 counties in forty-two different states. Four simple facts were sought, these being the chief items in the present day program of preventive medicine, namely, a health examination, a dental examination, vaccination against smallpox and immunization against diphtheria. Personal calls were made at each home by the investigator and the information secured by asking the parents direct questions for the information desired.

The data reported are based on the records of 146,000 children living in 156 cities, each with more than 50,000 population. Regardless of population, no city was represented by less than 300 family records. Three of the Kansas cities, therefore, are represented in the group, but data for the Kansas rural group are represented by less than the standard of family records for rural areas and therefore, accurate comparisons cannot be drawn.

In the cities, the standard for health examinations was forty-seven per cent.

All Kansas cities being below standard, Wichita reporting forty-one per cent, Kansas City forty per cent and Topeka but twenty per cent. The average for dental examinations was eleven per cent and all three Kansas cities equaled the average.

In smallpox vaccination the average was thirteen per cent. Wichita reported an average of fourteen per cent, or one per cent higher than average; Kansas City reported the same proportion as the average, while Topeka reported but eleven per cent. The average in diphtheria immunization was fourteen per cent. Topeka had three per cent more of the pre-school group immunized than the average; Kansas City equaled the average, while Wichita reported six per cent less than the average.

The composite ranking of the Kansas cities in comparison with the 153 other cities included in the study, in the application of the four health measures was Kansas City, 91; Wichita, 100, and Topeka, 109.

The facts as revealed by the study in the three Kansas cities are undoubtedly representative of the great majority of cities and rural communities in this state. During the pre-school age, is the best time to apply the principles of preventive medicine, for the period of preparation for a healthy body and a happy life begin with the pre-natal period, but may be most intensively applied after birth. On the organized medical profession, therefore, lies the responsibility of a continuation of the teaching and practice of the principles of preventive medicine.

EARLE G. BROWN, M.D.

————— R —————

Doctor: "What is the most you ever weighed?"

New Patient: "154 pounds."

Doctor: "And what is the least you ever weighed?"

New Patient: "Eight pounds."



### A Plan Submitted to the Wilson County Medical Society

EDGAR C. DUNCAN, M.D., Fredonia, Kan.

More or less extensive preparations have been made to take care of the paupers, and for the unemployed as far as food, fuel and clothing are concerned.

However, no preparations whatever have been made, or are being made, for medical service, and this service is no less essential than is food, fuel or clothing.

From time immemorial, physicians have been giving very largely of their services to pure charity and of course a considerable service to pure deadbeats, much more than the average of businesses and professions.

Government seems to be interfering more and more in the private affairs of our citizens which we believe is a bad thing. We object to State medicine just as the lawyer would object to the State taking over the practice of law; or the banker would object to the State taking over all banking activities; or the merchant would object to the State taking over the sale of all merchandise.

There is a widespread belief that the physician should be paid last if at all.

Gentlemen, you know in the professions such as law, a lawyer bases his fee on the amount involved, and the same holds true of the engineer and the architect. A physician knows full well that he must collect money for services rendered, if he is to maintain a respectable office with necessary equipment, otherwise there would be no medical service available when needed. Therefore we have established a fee schedule, which we believe is just, as applied to a rural community like Wilson County.

But the time is here, when in order to avoid state medicine, some common sense arrangements must be made to take care of the sick; after state medicine comes state banking, state railroading, state merchandising, etc.

Therefore we make the following tentative suggestions to the Wilson County Medical Society:

1. That this society and the county commissioners agree upon a fee

schedule for taking care of the paupers.

2. That this society appoint a committee on economics to work out a fee schedule based upon the patients' capacity to pay.
3. Some arrangements, either with the county commissioners or with some organization, to take care of medical service for the unemployed. The merchants are not being asked to extend unlimited credit to the unemployed and it is obviously impossible for them to do so; but neither is it sensible or possible for physicians to carry the enormous burden of medical service to these same unemployed.
4. No small group, such as physicians, should be expected to not only carry their own economic burdens during this world depression, and in addition carry the overwhelming burden of medical service to one-third of our population.

You will find organized medicine, which even in years of prosperity, contributed nearly four hundred millions in medical service annually in pure charity, will more than do its fair share now; but as a group we feel the laymen have not taken into consideration the present state of affairs nor shown much concern, as long as physicians can and will give so enormously to the pauper and the unemployed. Free medical service, under whatever guise, is just as demoralizing to the recipient, as England's dole, and is a certain forerunner of state socialism.

We therefore propose the following plan:

1. We propose that for paupers a fee, say, of one-third our regular fee be paid for surgery, obstetrics and accident cases; that a fee fifty to seventy-five cents be paid for an office call; one dollar for a house visit in town. But in order that there be no quibbling who is entitled to this service, let it be known that anyone who is receiving aid from the county be listed as eligible to receive medical services

at the above much reduced rate. Druggists should be consulted about filling prescriptions and furnishing other necessary sick room supplies.

2. **UNEMPLOYED**—Each community to create a fund, manner of creation to be determined, to reimburse the doctor one-fourth of his regular fee, and the remainder to stand as a charge against the recipient until he is regularly employed.

3. **CAPACITY TO PAY**—The president of each county medical society shall appoint a committee on economics and this committee shall work out very carefully a schedule based on the patient's ability to pay. The farmer offers a problem as well as the man in town and this makes it all the more important in agricultural Kansas, that the matter be approached and solved with care and wisdom. It is difficult to figure the farmer's income; he has his residence, garden, water and often his fuel and light for a cash rental, including the above items and 160 acres of land, for less than the town man pays for a residence. The county society is the organization to solve these problems, for solved they must be. The capacity-to-pay theory now is well established, and it applies to our every day affairs as well as to our so-called enemy of 1917. The supreme court of the state of Washington recently decided a case in favor of a physician for a fee of \$3500 for a thyroidectomy and some other work for a man who was amply able to pay, thus putting the stamp of approval on the capacity-to-pay idea. Paragraphs 1 and 2 have definite proposals for medical service to the indigent and the unemployed. For the paying groups we propose the committee on economics use the following as a basis for "conversations":

(a) Heads of families earning less than \$900 annually.

(b) Those earning \$900 to \$1400.

(c) Those earning over \$1400.

(d) Farmers who must be studied separately.

(e) Establish clinics where advisable, by the county medical society. (Recommend you study suggestions of Dr. A. J. McLaughlin as quoted by Dr. McVey, page 345, October Journal, and read carefully all Dr. McVey has to say.)

In counties where free clinics and near-free clinics have already been set up, the problem for the committee on economics is vastly greater than here in Wilson County. We must lay aside individualism and work together as an organization. Let's plan to take into our own hands the various phases of the treatment of the sick. The idea seems to be abroad that folks are just naturally entitled to free medical service; if this is true why not free autos, radios, food, clothes, etc, etc.?

If this plan finds favor, we as physicians would get no profit from the groups under Par. 1 and 2, but we would be partially compensated for our cash outlay and would not be carrying the entire burden for medical service for that large group caught and held by the world crash. Thus placing the burden anyone must agree is wholly unjust and to continue the present situation is impossible.

The methods outlined leave a man's self respect intact; he hasn't received the indispensable medical service free, but he knows he owes for it, and at a price he can afford to pay when regularly employed.

The county medical society is the organization to deal with medical service in this county, and it is to this society the laymen must look for aid in preventing the growing dissatisfaction with the present slipshod medical service from plunging us into state medicine, estimated additional taxes three billion dollars annually.

Nothing in this plan will interfere in the slightest with any physician in his charity work, nor does it prevent him from scaling down his regular fee on oc-



casion when it seems prudent and wise to do so.

It is hoped this society will look upon the broader aspect of this subject, instead of the immediate advantage or disadvantage it might give us.

When a man goes into a shoe store, the merchant does, in a way just what we propose to do in regard to medical service; he has a scale of prices to fit any pocket-book; he doesn't say, here is a seven-dollar shoe—take it or leave it, but the manufacturer has wisely provided him merchandise for the rich or the poor.

It is not the intention to give the groups different classes of medical service, but it is just possible that fewer x-rays and expensive and sometimes useless laboratory procedures will not be undertaken. If a man wants a dozen x-rays taken and has money to pay for them, well and good, providing we tell him it is not actually necessary.

Common sense, the experience of the Mayo clinic and many others, indicate a sliding scale of prices is not only feasible but entirely practicable. No one expects a millionaire and the \$1000 man to pay the same price for most commodities and certainly not the same price for a personal service like the physician gives; I could not hope to compete with Mr. Doherty for the services of an attorney, or an architect. Even Ford makes the "tin lizzy" for the poor doctor who abhors economics, and he makes the Lincoln for others.

This is quite a departure from our methods in the past, and suggestions, criticisms and even strangulation are in order.

If the society approves this plan, or any worthwhile part of it, it is my desire to first submit it to our county commissioners and if approved by them, get the chairman of the board of county commissioners to call a meeting of the hospital directors, presidents of the chambers of commerce of the various towns in the county, druggists, representatives of the American Legion posts, Veterans of Foreign Wars posts and other interested citizens, to discuss the plan, and if ap-

proved, proper steps to be taken to put it in operation.

## R SOCIETIES

### RILEY COUNTY SOCIETY

The regular monthly meeting of the Riley County Medical Society was called to order at the Wareham Hotel at 6:30 p.m. The minutes of the previous meeting were read and approved. Dr. Colt, Sr., invited the society to be his guest at dinner preceding the meeting in November to which guest speakers will be invited.

A tuberculosis clinic under direction of Dr. Kenney to be held on October 21st was announced.

Papers on Thyroid Disease were read by Drs. Siever and Colt, Jr., followed by general discussion.

The following members were present: Dr. Colt, Sr., Dr. Colt, Jr., Dr. Groody, Dr. Siever, Dr. Reitzel, Dr. Seyler, Dr. Cave, Dr. Nelson.

Meeting adjourned.

BARRETT A. NELSON, Secretary.

### CLAY COUNTY SOCIETY

The regular meeting of the Clay County Medical Society was held on the evening of October 14, 1931, at the Bartell House at Junction City, Kansas. The members of the society and a number of guests were entertained at a dinner given at the hotel by Drs. Carr and Smiley of Junction City.

Following the dinner, the meeting was called to order by the president, Dr. C. C. Stillman, at 8:21 p.m. The minutes of the preceding meeting were read and approved.

An application for membership in the society signed by Dr. Warren T. Creviston, Olsburg, Kansas, was read and on motion was referred to the board of censors.

Following the business meeting Dr. James R. Elliott of Kansas City, Mo., was presented to the society by the president as the guest speaker of the evening. Dr. Elliott gave a very interesting, instructive and practical talk on "The Use of Local Anaesthesia in the Reduction of Fractures and Dislocations."

A vote of thanks was extended to Drs.

Carr and Smiley for their hospitality to the society.

Dr. J. D. Colt, Sr., president of the Riley County Medical Society, extended an invitation to the members of the Clay County Medical Society to hold a joint meeting with them on the evening of November 9, at the Wareham Hotel at Manhattan, Kansas. He assured those present that there would be plenty to eat and a good program. On motion, his invitation was accepted.

Twelve members and ten visitors were in attendance. Members present were: Drs. E. N. Martin, R. W. Diver, Robert Algie, R. J. Morton, J. L. Dixon, and F. R. Croson of Clay Center; Drs. W. A. Carr, and W. A. Smiley of Junction City; Drs. J. S. Scott and H. E. Potter of Clifton; Dr. C. C. Stillman of Morganville; Dr. C. C. Lewis of Industry.

Visitors present were: Dr. James R. Elliott, the guest speaker of the evening, of Kansas City, Mo., Drs. J. D. Colt, Sr., J. D. Colt, Jr., R. R. Cave, D. A. Nelson, and Ryan Schonhoven of Manhattan; Drs. W. S. Yates and H. C. Hanna of Junction City; Dr. R. B. McVay of Linn; Dr. Geo. E. Brethour of Dwight.

Upon motion the meeting adjourned at 9:34 p.m.

F. R. CROSON, Secretary.

#### SHAWNEE COUNTY SOCIETY

The Shawnee County Medical Society met at the Topeka State Hospital on Monday evening, November 2. Dr. W. A. Sullivan of Topeka was elected to active membership. The society by vote appropriated sufficient funds for a one-year's subscription to "Folks" for each of the teachers in rural Shawnee County.

The following program was presented by the staff of the State Hospital:

Demonstration of the Treatment of Paresis by Hyperpyrexia, Dr. Brian; demonstration of the Movement of Mice Bodies in Dementia Precox, Dr. Gerundo; demonstration of Crescent or Semilunar Type Erythrocytes, Dr. Perry.

The following resolutions were adopted by the Society:

DR. CHARLES B. VAN HORN

"On October 16, 1931, Charles B. Van Horn, a faithful member of this society,

died at Stormont Hospital from Streptococcus Septicemia. Dr. Van Horn was born at Marshalltown, Iowa, August 8, 1872, and received his preliminary education there, graduating from Marshalltown Seminary. After several years spent in educational work, he entered the Kansas Medical College and graduated in 1904. He engaged in an active, arduous general practice and continued in it until the onset of his last illness, beloved by the majority of his patients and respected by all his colleagues in the profession. As physician to The Boys Industrial School for twenty years, he made a valuable contribution to character building in these under-privileged boys. Dr. Van Horn engaged in other forms of boys' work and was active in civic and educational circles besides, keeping an active interest in the advancement of medicine. He was a staff member of two of our local hospitals and served as a member of the Topeka School Board.

"Dr. Van Horn was an alert, kindly, straight forward man of fine character, a good friend to his patients and every brother physician. His death leaves us with a deep sense of personal loss.

"In view of these facts, be it resolved that the Shawnee County Medical Society hereby expresses its own sorrow and extends its sympathy to his family."

DR. WILLIAM EDLEY McVEY

"Again is our society called upon to commemorate the passing of one of its most valued members. Dr. William Edley McVey, one of its founders, died on the 21st of October, 1931, at Christ's Hospital. His fatal illness was brief and his death an unexpected shock to his many friends.

"It is fitting that our records should contain some memorial of his life and service in relation to this body and to the profession at large.

"Dr. McVey was pre-eminently a medical publicist. He believed in the practical organization of our profession, for economic, as well as scientific purposes. Throughout his professional career he did everything in his power to make local and state societies effective instru-



ments for the benefit of the membership and of the public. He devoted much time and effort toward securing desirable medical legislation in this direction. While some of his efforts failed, he never regarded failure as final. He simply girded himself for renewed and undaunted effort to bring about what he considered just and necessary for all concerned.

"He was an able and fluent writer and devoted a large part of his professional life to the carrying on of medical publications. The Journal of the Kansas Medical Society was under his editorial management since 1914, and grew, during that period, from slender proportions and feeble pretensions, to one of the best state society publications in the country. In its files are to be found very many articles from his pen which will be lasting testimonials of his ability and devotion.

"He was a man of wide acquaintance and innumerable friendships. He was able to hold his friends in bonds of real attachment because he was sympathetic, generous and true. He never stooped to deceit or subterfuge, but was frank to disapprove, as well as to commend, as, to him, the occasion seemed to require. He was no back-slapper, but moved among his associates with a gentle dignity and quiet reserve that were innate and without affectation. He was systematic and unremitting in all his varied labors, and thus was able to undertake and accomplish his ever-increasing tasks.

"He was not merely a member of this society, but he was also a regular attendant and worker. He had become so closely identified with all its activities that he was almost indispensable, and came to be counted upon, more and more, as a sort of permanent fixture. Thus the familiarity we had with his presence and his willingness to serve, bred in us a certain thoughtless indifference to his value. Even those who knew him best did not really appreciate him and his unflagging spirit until now, when we suddenly discover that he is gone. During all his long years of work for us, there went, unspoken, the words of commendation which might have cheered and stimulated him

to carry on, with better spirits, his ceaseless and wearisome round of toil. He was not insensible to honest praise. But now, when he is deaf to it, it comes, in good measure, from far and near.

"We might well have banqueted him, held a special meeting in his honor and given him some token of our love and appreciation. Now, it is too late. At this time we can only pay a poor tribute of words to his memory, and bear a precious picture of him in our hearts.

"It is, therefore, with a sense of deep sorrow and regret that we place on record this memorial to our departed colleague, and order a copy of it sent to his bereaved family, together with expressions of our sincere condolence, as a society."

Respectfully submitted,

EARLE G. BROWN, M.D., Secretary.

#### BARTON COUNTY SOCIETY

The regular Fall meeting of the Barton County Medical Society was held at St. Rose Hospital in Great Bend, October 14 with Dr. Sam H. Snyder and Dr. C. C. Dennie of Kansas City as speakers. Dr. Dennie gave a good historical account of syphilis and some of the latest theories as to its treatment especially with malaria which was demonstrated with lantern slide specimens. Dr. Snyder gave a very good talk on pulmonary tuberculosis showing x-ray plates to demonstrate the effects of treatment with rest, with compression and with thoracotomy.

Dinner was served by the Sisters of the Hospital in their usual good way and music for the dinner was supplied by the orchestra of the training school of the hospital.

Those attending the meeting outside of Barton County were Doctors C. C. Dennie, S. H. Snyder of Kansas City; F. E. Wallace of Chase; J. E. Staatz of Bushton; L. A. Chickening, H. L. Scales of Hutchinson; C. C. Price, C. E. Fischer, J. S. McBride of Lyons; S. W. Schmidt of Lyons; J. G. Janney, W. H. Head of Dodge City; Jos. W. Spearing of Cimarron; Maggie L. McRae of Sterling; G. O. Speirs of Spearville; F. S.

Hawes of Russell; LeRoy Shepard of Larned.

Members of the society attending were H. W. Jury of Claflin; T. J. Brown, L. R. McGill of Hoisington; C. W. Lyons, R. J. Leiker of Ellinwood; Milton Morrow, M. F. Russell, C. W. Zugg, H. C. Embry, E. C. Button, R. J. Wheeler, of Great Bend; Addison Kendall, Don Kendall, E. E. Morrison, of Great Bend. Will Townsley, editor of the Great Bend Tribune, also attended to report the meeting.

L. R. MCGILL, M.D., Secretary.

#### FRANKLIN COUNTY SOCIETY

The 27th Annual Banquet of the Franklin County Medical Society was held October 28, 1931, at the Nelson Hotel with fifty members and guest present. After a delicious dinner, with cigars for the men and candy for the ladies, the program was turned over to Dr. Dawson, who proved to be an eloquent toastmaster.

The Ottawa University male quartet gave us several enjoyable selections, and Dr. G. G. Kreeger, as retiring president, made a few timely farewell remarks. Dr. Ralph H. Major of the University of Kansas School of Medicine then gave us a very interesting talk, illustrated with lantern slides on "Padua," with an account of the old school and some of its famous alumni.

The members then held a business meeting at which the annual election of officers took place. The officers for 1932 are: President, Dr. John B. Davis; Vice President, Dr. John A. Dyer; Secretary and Treasurer, Dr. Hobart K. B. Allebach.

The meeting adjourned at 10:10 p. m.

HOBART K. B. ALLEBACH, Secretary.

#### Kansas Medical Auxiliary

MRS. J. THERON HUNTER, Topeka

In order to accelerate the growth of interest in the Kansas Medical Auxiliary, we are asking those women who know of past interesting practices, either continued, or lost to the present members, to write in suggestions for their continuance, or an explanation of their procedure. In this way we will be enabled

to put new life into the Auxiliary and inaugurate some beneficial precedents. Accept this as a personal appeal; and if you feel that you can in any way help us in this building process, will you write to Mrs. J. Theron Hunter, 1231 Clay Street, Topeka, Kansas.

About the country some very interesting work has been accomplished by the women. Surely the women of Kansas have the energy and capability to produce similar results.

Every physician who receives the Journal of the American Medical Association should also receive the Kansas Medical Journal. If we cannot train our husbands to bring home this Journal, we might subscribe for it ourselves, since it will be sent to any address for two dollars a year.

Our national president, Mrs. A. B. McGothlan, attended the annual meeting of the Auxiliary to the Kentucky State Medical Society. She reported many interesting features of that Auxiliary. Here are some of them:

Kentucky has a standard of excellence for her component auxiliary. Points of excellence are acquired for various attainments, such as—the study of the state medical and health laws, the use of the national Auxiliary Study Program, participation in the Jane Todd Crawford Memorial, review in each Auxiliary of Gossett's "What the Public Should Know About Child-Birth."

In Kentucky, each month, from four broadcasting stations a ten minute talk is given. Various physicians of the State Medical Association are selected to give these talks.

The Kentucky Auxiliary promoted a contest carried on in ten counties in which a prize was given to the school boy or girl writing the best essay on the value of a County Health Unit.

The value of the County Health Unit is emphasized by the New York State Health Commission reporting on these health needs of that state requiring legislative action before further progress can be made. The first item of that program is a "State-wide system of County Health departments (the County Health



Unit) with full time health officers (to be required by law)."

If your Auxiliary is not informed of the nature and the value of the County Health Unit, devote a meeting to the use of the Study Program on that subject supplied by the National Auxiliary.

It is worth knowing that the American Medical Association will supply five minute radio talks on seventy-two different health topics, and fifteen minute radio talks on sixty-two different health topics.

The president of the Texas Auxiliary, Mrs. H. R. Dudgeon, reported that Texas had forty-three organized and working auxiliaries—and more coming. A good organization record to emulate.

In his message to the Woman's Auxiliary to the Colorado State Medical Association, Dr. E. S. Judd, president of the American Medical Association, reminds the women of the opportunities for service to scientific medicine, through their membership in the lay organizations. He quotes the president of the Maine Medical Association as saying a systematic propaganda was being carried out for the purpose of promoting irregular medical practices. This is done by sending representatives to women's clubs and other organizations to disseminate the information. "If women's auxiliaries," says Dr. Judd, "will assume the responsibility of helping the members of their clubs and also the parent-teacher associations keep informed concerning the proper medical practices they could perform a great service to their communities."

Are you seeking to add to your programs something new? The Missouri Program chairman suggests "What is New in Medicine? In Surgery? In Anesthesia?"

In California the program chairman, Mrs. F. E. Coulter, suggested two estimable eight months programs for county auxiliaries. The first is for auxiliaries in counties where a County Health Unit exists. The second is for auxiliaries in counties where no County Health Unit exists.

Since they are not copyrighted we are

paying Mrs. Coulter the compliment of passing them on. Here they are:

## I

September—"Why an Auxiliary"—Speaker if possible a state officer, preferably the president.

October—"Working Principles of our own County Health Unit"—The County Health Officer.

November—"Common Defects in Children" or "Contagion and Immunization"—Member using National Auxiliary material.

December—"Teeth and their Relation to Health"—School Dentist.

January—"What are We doing for the Physically Underprivileged Child"—Selected Speaker.

February—"Mental Hygiene"—Local Psychiatrist or Selected Speaker.

March—(a) Book Review, "The Human Mind," Menninger—Auxiliary Member. (b) "What our County is doing for the Mentally Ill"—Selected Speaker.

April—(a) Book Review—"Biography of the Virgin Mind," Dakin—Auxiliary Member. (b) "Our State Health Laws"—Selected Speaker.

## II

September—Same as in I.

October—"Advantages of County Health Unit"—Member using National Auxiliary material.

November—"Common Defects in Children"—Member using National Auxiliary material.

December—"Contagion and Immunization"—Member County Medical Society.

January—"Local Health Problems"—Round Table.

February—"What our State is doing for the Mentally Ill"—A Superintendent of State Hospital.

March—Book Review, "The Human Mind"—Menninger—Auxiliary Member.

April—(a) Book Review—"Biography of the Virgin Mind," Dakin—Auxiliary Member. (b) "Our State Health Laws"—Selected Speaker.

The programs of all meetings should include as a "roll call" medical current events, new discoveries, accomplishments, and happenings.

## R

## DEATHS

Chesley C. Uhls, White City, Kansas, aged 69, died August 29 of cerebral hemorrhage and chronic nephritis. He graduated from Missouri Medical College, St. Louis, in 1887. He was not a member of the Society.

Alfred R. Haas, Ellinwood, Kansas, aged 60, died August 19 in Great Bend, Kansas, of septicemia. He graduated from University Medical College of Kansas City, Missouri, in 1901. He was a member of the Society.

William Henry Yandell, Piedmont, Kansas, aged 61, died September 4 in a hospital in Wichita of arteriosclerosis, myocarditis and nephritis. He graduated from Louisville Medical College in 1901. He was not a member of the Society.

Jacob L. O'Dell, Pratt, Kansas, aged 79, died July 31 in a hospital in Wichita of chronic endocarditis with aortic and mitral insufficiency. He was not a member of the Society.

John Rudolph, Lawrence, Kansas, aged 69, died September 11 of carcinoma of the stomach and duodenum. He graduated from the Maryland Medical College, Baltimore, in 1900. He was not a member of the Society.

### **Tributes**

At the funeral of Dr. William Edley McVey, Dr. E. C. Duncan and Dr. O. P. Davis were on the program, and at the request of many friends, their tributes offered on that occasion, are published below.

#### **ADDRESS BY DR. DAVIS**

I should find it very hard to give even a condensed appreciation of my friend, of many long years, extemporaneously. Indeed, I cannot trust myself to make the attempt under the present conditions of emotional stress. I have, therefore, committed to writing a short tribute to his memory.

Ours was a long and unbroken friendship. It started with a somewhat casual acquaintance, some thirty-five years ago, and grew, year by year, into what was, to myself at least, a brotherly affection. His nature was such that he did not warm quickly to every one. I feel myself an object of congratulation, therefore, that he took me into his confidence and poured out the wealth of his comradeship for me to share. I have always been grateful for his influence on my life, and have tried, in my own poor way, to manifest my appreciation and regard for him all through the years.

Dr. McVey had a rich, well-trained mind, well-stored, not only with the knowledge of his profession, but with that of the humanities as well. We were fond of getting together for informal conversation about things of mutual interest. We used to have one evening a week devoted to this special purpose. Sometimes we had a third person in the gathering. I think that we discussed

nearly every subject within the bounds of common human interest and experience. Needless to say that the benefit was mine and the wisdom was his. Of course, we did not always see things eye to eye, yet we never fell out nor allowed anything to estrange us.

The Doctor's power of expressing his thoughts clearly, logically and beautifully, whether by voice or pen, is well known. It has not always been appreciated. But the printed records will stand to his credit throughout the coming years, indelible testimonials of his high qualities as a medical writer and editor. He was patient and long-suffering in the face of honest opposition, even when such opposition seemed harsh and unjust. He was never complacent nor compromising in the face of duplicity. If anyone proved insincere or mendacious, in word or conduct, he broke contact with such person forever. His own character was clean and he expected others to be reasonably so.

I shall not dwell on his qualities as a man and as a citizen, except to say that he was a man of dignity, reserve, frank candor, sympathy with all measures for the public good and devotion to his family and his friends. What more need be said of any man?

Of late I think he had been more introspective than usual. Sometimes I seemed to catch a far-seeing look in his eyes, as though he had a mental vision of things which are not often given men to see, except perhaps in dreams. It may be that he had a premonition of what was impending, not far ahead. At any rate, his devotion to his work became more unremitting, as though he were in haste to get it done. His love for his friends became more manifest, as though he felt approaching a long separation. His attitude toward life became more placid, as though he anticipated a better life ahead.

What a friend he was! What a boon to any one to have had his friendship for his own! What a joy to keep him ever-living, in the inner chamber of our memory! And to dream, at least, even fondly to hope, that sometime, somehow, somewhere, "Beyond the Ever and the Never," we shall meet again.



## ADDRESS BY DR. DUNCAN

Fifteen hundred physicians in Kansas today are mourning the passing of our beloved brother physician, Dr. W. E. McVey.

He has for many years been the editor of the Journal of the Kansas Medical Society, and that Journal under his management is second to none in the United States. He was not only an able editor, but as an editorial writer, he had few equals and no superior. The Journal, edited by him, compares favorably with that of any other state.

He was that rare medical writer, who could write articles the non-medical man could understand and appreciate.

By his efforts alone, a new magazine was started, last summer, for circulation among the laity for the purpose of giving authentic medical facts. It already has a circulation of four thousand. This magazine, had he done nothing else, would entitle him to be forever enshrined in the hearts of Kansas doctors and those who read and profit by it.

For several years I have been closely associated with Dr. McVey; he has always been fair and square, and I can utter no higher praise.

It was a pleasure, always, to see him and work with him.

Just how the Kansas Medical Society can fill his place, I do not know.

Few physicians in Kansas have done so much for organized medicine and for the citizens of the state, as has Dr. McVey.

On behalf of the Kansas Medical Society, I extend to the family our sincerest sympathy. And, personally, I have lost a friend who cannot be replaced.

IN MEMORIAM—J. E. MINNEY, M.D.

Altadena, Calif.

The history of the average man can be written in three words, viz.: born—lived—died.

But to this brief summary of man to the average physician may be added, he served his fellow man and "went about doing good." And in addition to this Dr. McVey served in a broader field, but one no less effective. He summarized

from month to month the wisdom of his fellows in their work of mercy for human kind in the Journal of the Kansas Medical Society and other medical publications as editor. In this way he helped the medical man to keep up in scientific the relief of suffering and in the prolongation of human life.

Dr. McVey was a ready writer. He was a progressive, and many of his editorials were equal to those in the cosmopolitan medical journals, if not superior in statement, content and progressive leadership, in medical thought.

Dr. McVey was my friend. I met him first when he came to Topeka in 1885 with his father, the late Richard E. McVey, and the year before he graduated in medicine. After graduation, he practiced medicine with his father. Our offices were on the same floor. He was of a retiring disposition, quiet and somewhat reticent. Meeting daily and visiting each other, he soon suggested starting a medical journal. His suggestion fruited, and in May 1889, the first number of the *Kansas Medical Journal* was published. Dr. W. E. McVey was manager and publisher and W. L. Schenck of Osage City, S. G. Stewart and J. E. Minney of Topeka were the editorial committee. From May, 1889, to the time of his death (with a short interval) Dr. McVey was either manager or editor, or both of a medical journal. He made good. The *Kansas Medical Journal* was the forerunner of the Kansas Medical College. Although the late Drs. J. C. McClintock and M. B. Ward were the first promoters of the college and members of the faculty, Dr. McVey was a teacher during the life of the college and one of the principal factors in its success.

Dr. McVey's religious belief was the same as that of the writer, and that is if we get right with our fellow man we will be right with God.

J. E. MINNEY, M.D.

—————R—————

The members of Christ's Hospital Training School Alumnae Association join in a tribute to one who through the years has so generously given of his

kindly interest, advice and skill—Dr. McVey.

✱ ✱ ✱

### RELAXATIVES

Mamma: "But, Johnnie, if your earache is better, why do you keep on crying?"

Johnnie: "I'm waiting for D-daddy to c-come home. He's never s-seen me with a earache."

✱ ✱ ✱

The stout woman struggled to enter the narrow doorway on a train.

"Hurry up there," shouted the conductor. "Hurry up! get in edgeways, madam!"

The would-be traveler regarded the official with an angry glare. "And what," she snapped bitterly, "if I ain't got no edge?"—Exchange.

✱ ✱ ✱

Mrs. Junewed: The doctor says I must cook your foods with vitamins in them but I forget what they were.

Mr. Junewed: Oh, just make it hash!—Pathfinder.

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### **Tribromomethyl Alcohol (Avertin) as a Rectal Anaesthetic**

LEWIS W. ANGLE, M.D., Kansas City, Kan.

Department of Surgery, St. Margaret's Hospital  
Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

The presence of pain, fear and excitement have been the body companions of surgery since the advent of surgery to science, but not until the days of Morton and Crawford were those undesirable features divorced from operative surgery, and then not in their entirety, but to such an extent that pain was relieved.

From the days of these two pioneers to the present day many methods of alleviating pain and producing anesthesia at operation have been devised and elaborated upon. Roux and Pirogoff, in 1846 and 1847, respectively, were the first to attempt rectal anesthesia with an aqueous solution of ether and the rectal administration of ether vapor. Following this, the advent of local anesthesia caused a wave of enthusiasm, but the frequent incomplete anesthesia obtained by local anesthesia caused a loss of interest in such methods. Gawthmey<sup>1</sup> in 1913 next attempted to produce anesthesia by the rectal injection of an ether and oil solution which has not been very popular, due to the uncertain rate of absorption of ether in the oil mixture and the relatively short duration of the anesthetic. Therefore, we have apparently been without a desirable rectal anesthetic until 1923, when Willstatter and Duisberg<sup>2</sup> first prepared tribromomethyl alcohol; but it was Eichholtz<sup>3</sup> in 1927, who advocated its use as a rectal anesthetic. Since then over 500,000 cases of tribromomethyl alcohol anesthesia have been reported in European literature, and quite a few in American literature. From the excellent report on these records, and from our own experience, it seems that this new anesthetic is most adaptable to

surgical procedure as a basic anesthetic.

Tribromomethyl alcohol has at its command many valuable and agreeable attributes. Chief among which is the ease with which we may produce not only a state of unconsciousness but of anesthesia. We are able to produce unconsciousness with no fright on the part of the patient, while he is totally unaware of his approaching state. What could be more pleasing or acceptable in pediatric surgery or surgery in those individuals who are highly excitable or nervous or that individual who dreads the ordeal of an operation by past experiences?

The individual variations as to susceptibility are present with the use of tribromomethyl alcohol as in other anesthetics. The degree of anesthesia obtained with it determines the required amount of ether, gas or local infiltration which may be added safely to a desired degree of anesthesia. The combination of tribromomethyl alcohol with inhalation anesthesia seems to produce a state unattainable with a single general anesthetic and approaches Lundy's principle of a balanced anesthesia.

#### DESCRIPTION

Tribromomethyl alcohol or avertin is a white crystalline substance with a melting point of 80° C. easily soluble in water at 40° C. The product for anesthetic purposes is marketed as a clear solution, of which 1 c.c. contains 1 gram of the substance, dissolved in amylene hydrate (tertiary amylalcohol). When heated above 45° C. the molecule breaks down with the formation of dibromacetaldehyde and bromic acid, the dibromacetaldehyde being a highly toxic irritant to the intestinal mucosa.

#### PREPARATION AND ADMINISTRATION

The preparation of your patient is similar to that for any surgical procedure except that the lower bowel should be entirely emptied by the use of an



enema the night before operation, and a small enema on the morning of operation. As to the pre-operative administration of drugs, I think it unnecessary to give any. Some users advocate the use of small doses of morphine, while the reports from European clinics show that the vast majority use veronal or a similar drug as preoperative medication. In our series all methods were used and the best results were obtained by the non-use of drugs preoperatively.

The drug is best administered in the patient's room where the surroundings can be made quiet and dark, conducive to sleep. The required amount of avertin is measured and mixed with distilled water at (35° to 40° C.) a sufficient quantity to make a 3 per cent solution. This solution is thoroughly stirred, and then tested with a few drops of congo red to determine the presence of dibromacetaldehyde. If the solution remains pink after adding the congo red, it is desirable to use, but should it turn purple the molecules have broken down and the solution should be discarded. This test is obligatory before the solution is ever placed into the rectum. One-half hour before operation the solution is introduced into the rectum by means of a small rectal tube or an ordinary catheter, this being performed very slowly. When completed the tube is clamped off and left in the rectum for a few minutes. Avertin in very small doses acts as an antipyretic, in large doses as a hypnotic, in still larger doses as a narcotic, and lastly as an anesthetic. The therapeutic latitudes of avertin, as stated by the work of Lendle,<sup>4</sup> come in the sphere of related substances. Accordingly, this substance takes an exceptional position through its rapid absorbability and simultaneously increased effectiveness. The result of the anesthetic is sometimes dependent upon the blood concentration and the specific coefficient of distribution throughout the body. Only those bodies can be used for rectal methods which are not only quickly absorbed, but which can be easily and completely destroyed by the body. In reality, it has been shown by the work of Parsons, Kilian and Schneider<sup>5, 6</sup> that avertin pre-

sents these requirements more satisfactorily than any other compound.

The dosage of avertin has been a question of much dispute both among foreign and domestic users, varying from 60 to 130 milligrams per kilogram body weight. In our series, the dosage ranged from 90 to 110 milligrams per kilogram body weight (exclusive of obstetrical cases in which 60 milligrams per kilogram body weight was used). I do not think we should confine ourselves to the use of body weight as an index to the dose to be used. We arrived at the above figure by taking 100 milligrams per kilogram body weight as an average in standard, and increased or decreased the dose according to the condition of the patient, age and sex bearing an important influence. It has been found that children and young adults require a relatively larger dose than older individuals who are debilitated or those affected with faulty elimination. As to sex, we always used a slightly larger dose for men than for women, never exceeding 10 c.c. for one dose.

#### ACTION

Once avertin is placed in the rectum the absorption is rather rapid; in 3 to 5 minutes the patient acquires a state of deep slumber and is easily transferred to the operating room. Straub<sup>7</sup> reports that 80 per cent is absorbed in the first 20 minutes and 95 per cent absorbed within the first two hours of the anesthetic, and during the anesthesia Sebenius<sup>8</sup> has found it in the blood in a concentration of 6 to 9 milligrams per cent.

The action of avertin on the cardiovascular system shows a slight variation from normal. The pulse volume is good, rate slightly above normal, rarely above 100. There is usually a slight drop in systolic blood pressure, the diastolic remaining constant. The systolic may fall as much as 15 mm. of mercury but soon returns to normal. Unger and May<sup>9</sup> have reported a number of cases in which they used an electrocardiograph, and were unable to find any change attributable to the anesthetic. Parsons<sup>5</sup> in his experimental work shows that avertin resembles chloroform in its action upon the heart, but is only one-sixteenth as

toxic. Therefore, avertin has a relatively low toxicity upon the cardiovascular system.

Common to many anesthetics the respiratory rate is slowed, but there is an increase in depth. Straub<sup>10</sup> has found, experimentally, that the respiratory efficiency is maintained by an increase in the depth of breathing. In the body avertin is detoxicated in the liver with the formation of urobromalic acid, a product formed in combination with glycuronic acid. Straub has been able to recover 81 per cent of the drug in combination from the urine within 48 hours, and Parsons recovered 72 per cent in the same period of time. He also recovered slight traces of bromine in sweat but none from the expired air or feces. According to Parson's experimental work there are four ways in which it is possible for avertin to be excreted: 1, as sodium bromide; 2, as unchanged avertin; 3, as urobromalic acid; 4, and as an organic compound of bromide other than unchanged avertin or urobromalic acid.

White and Kreiselman<sup>11</sup> in a series of analyzed cases report the comparative changes after operation as follows: a slight increase in white blood cells, blood sugar, non-protein nitrogen, pulse rate, respiration rate and systolic blood pressure; a slight decrease in red blood cells, hemoglobin, chlorides, carbon dioxide and diastolic blood pressure.

#### POSTOPERATIVE STAGE

In any surgical procedure the postoperative condition of a patient is of great concern to the operator. Patients who have taken an average dose of avertin usually remain in a state of analgesia and amnesia from one to three hours after returning to their room. During this time the corneal reflexes are active, the sleep is light, but deep enough to alleviate pain and discomfort. On leaving the operating room the patient as a rule is dry and warm, with an unusually pink color, and so continues through the postoperative stage, toward the end of which the patient may complain of pain, thirst or hunger, and upon relief he resumes his sleep, which may last several hours. Postoperative distention is remarkably decreased, also abdominal pain

which is much less than that following general anesthesia. The patient should be watched continuously by an attendant. The masseter muscles are relaxed, the tongue and jaws drop and the pharyngeal reflexes are diminished. The failure to keep an open airway at all times may result in asphyxia. As a precaution to such difficulties from mechanical obstruction an airway could be inserted as soon as the pharyngeal reflexes are abolished, leaving it in place during operation and during the postoperative stage.

In our series, we have not observed a single case of rectal irritation, mucous discharge from the bowel, or postoperative vomiting. No respiratory complications as bronchitis or pneumonia were seen. In other words, in our series of over 200 cases no ill effects attributed to the anesthetic have been observed.

#### ADVANTAGES AND DISADVANTAGES

The advantages of avertin are manifold:

1. Prolonged sleep following operation, making it unnecessary to use morphine for the relief of postoperative pain.

2. Complete absence of mental distress or stage of excitement, preoperatively or postoperatively.

3. Decreased nausea and vomiting.

4. Relative infrequency of postoperative respiratory complications.

5. Rapid elimination, with no direct injury to the organs involved.

6. Convenience for operation about the head and neck and in all phases of plastic surgery.

7. Especially adapted for thoracic surgery.

8. Of special value in prolonged operations, as neural surgery and prolonged abdominal operations.

Avertin has been found to be of special value in controlling convulsions in tetanus. In such a condition we have the absence of operation trauma. Therefore, the patient's condition warrants a larger dose. I have seen excellent results obtained in one instance, the convulsion disappearing promptly, but as to the effect or duration of the disease, it is uncertain. Lawen<sup>12</sup> reports one case in



which he gave twenty anesthetics, one after another, without injury to the patient, thereby showing the non-cumulative effect after repeated doses. The disadvantages are few and can be obviated by a careful administration of the drug, by not overheating the solution, guarding against rectal irritation. I think care should be taken to maintain an attitude of conservatism relative to dosage by not attempting to use avertin as a general anesthetic, but as a basal anesthetic. The contraindications are few and may be enumerated as follows: 1. Advanced diseases of the kidney or liver; 2. acidosis; 3. extreme cachexia; 4. ulcerative diseases of the rectum.

#### CONCLUSIONS

Our series consisted of the following operations: herniotomies, appendectomies, thyroidectomies, cholecystectomies, pelvic operations, thoracoplasties, phrenic avulsion, brain tumors and radical antrum operations, plastic surgery and obstetrics.

In all cases we were very conservative regarding the dose and in no case did we attempt to get complete anesthesia with avertin alone, but in two thyroidectomies and two thoracoplasties the operation was completed without the addition of local infiltration or an inhalation anesthetic. In all four of these cases 100 milligrams per kilogram body weight was given. Very few authors have reported deaths from avertin, but there are some, and a conservative estimate from the literature would place the rate at 3 in 10,000.<sup>13</sup> Killian<sup>14</sup> reports several deaths after avertin anesthetic, but had no proof that the anesthetic caused death in all cases, due to the fact that a post-mortem was not done on all cases. The majority of these reported deaths occurred in the years 1927, 1928 and 1929, when doses were used, attempting to use avertin and a general anesthetic, not appreciating it as a basal anesthetic.

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—R—

### The Present Status of Urinary Antiseptics

ARTHUR D. GRAY, M.D., Topeka, Kan.

Read before the Annual Meeting of the Kansas Medical Society, Manhattan, Kan., May 5, 6 and 7, 1931.

It has been said that the reason there are so many remedies for gonorrhea is that none of them is so very satisfactory. One cannot but wonder if this might not also be said of our urinary antiseptics.

Briefly, the qualifications of a perfect urinary antiseptic would be a stable, non-toxic, non-irritating drug capable of administration by mouth, and which, in a high dilution in the urine, would exert an antiseptic action. No drug or chemical at this time can be said to completely meet all these requirements.

In this paper we are chiefly concerned with drugs capable of oral administration. Chemicals, however efficient when applied locally, are hardly within the range of our subject and others usually given by the intravenous method may only be touched on. Many of the older drugs which have been supposed to impart antiseptic qualities to the urine such as salol, boric acid, salicylic acid, the volatile oils of sandalwood, copaiba, etc., are actually of such uncertain value in most cases that they will not be considered in this paper.

During the last decade countless new urinary antiseptics have been placed on the market. Of these many are not strictly new in that they are preparations or combinations with other chemicals of the old standby, hexamethylenamine. Of the rest a very large per cent are synthetic in origin and are organic compounds, many of them incorporating various dyes. It cannot, of course, be within the province of this paper to go

into a detailed description of all of the reputable preparations of this kind on the market. Nor shall we attempt to set forth the claims made for their products by the various manufacturing chemists regardless of their known integrity or the dependability of their clinical reports. Instead we shall simply mention a few of the standard preparations now available and honestly and fairly set forth our own observations and the conclusions we have reached during the last five years.

For many years hexamethylenamine has been considered our best urinary antiseptic. To the liberation of formaldehyd in acid urine the bactericidal effect is attributed. It is inert in alkaline or even neutral urine, and most efficient in a concentrated definitely acid urine. It is due to this fact that it has apparently failed in the hands of many, as it is not an uncommon occurrence to find the patient taking an alkali to relieve his burning urine and at the same time being given urotropin by his physician. Strange as it may seem to most of you I have found both an alkali and urotropin being prescribed at the same time by some physicians. It has also been our experience that little results are obtained in the average adult when less than 60 to 90 grains a day are given. In this size dose bladder irritability often appears by the third or fourth day, and it is often advisable to discontinue the urotropin and thoroughly alkalize the urine for 24 hours, after which the urotropin is resumed. I am personally of the opinion that urotropin should never be given except in conjunction with a definite acidifying agent, and in a minimum of eight ounces of water to every ten grains of the drug.

A number of satisfactory preparations are on the market in which the urotropin is incorporated in a tablet with acid sodium phosphate or sodium benzoate. A favorite of ours is an effervescent salt carrying about twenty grains of acid sodium phosphate and five grains of hexamethylenamine to each sixty grains of the salt and marketed under the trade name of Formohydron. This preparation is agreeable to the taste and is tolerated

extremely well. The intravenous use of urotropin has been advocated by many, but we do not find that this method is necessary to secure results. Urotropin is so rapidly absorbed and so rapidly eliminated that to us there is little advantage in the intravenous method.

Helmitol, another reputable proprietary drug, which is supposed to liberate formaldehyd in either alkaline or acid urine, has proved very satisfactory in our hands in those cases where acidification of the urine is impractical.

Several years ago Veader Leonard added two alkyl radicals to n-propyl resorcinol, which had been previously synthesized by Johnson, forming n-hexyl resorcinol. Since that time this compound has had tremendous vogue. Theoretically, it meets with every requirement of a urinary antiseptic. In most hands the clinical results with it are most satisfactory, but as is so often the case good results are not invariable. Given in the maximum doses recommended and over adequate lengths of time, it frequently fails to secure the clinical results desired. All this being true, it must be conceded that this preparation is one of the valuable additions to our list of urinary antiseptics.

Among the older dyes advocated as urinary antiseptics are proflavine and acriflavine. In moderate doses these dyes do not appear to produce any toxic symptoms, and that they do exert some definite action on the urine is indicated by the very evident color after ingestion by mouth. The clinical results obtained from their use, especially in cases which have not responded to other means of treatment, are satisfactory in a sufficiently high per cent of cases to warrant their being considered as urinary antiseptics. It is not our experience that they are as dependable or as useful as some of the newer dye preparations.

Recently there have been developed several preparations of an azo dye of the pyridine series. The mono-hydrochloride of an azo dye of the pyridine series known under the trade name of Pyridium is the one with which we are most familiar. Mallophone and Serenium, if not chemically identical, are very similar.



These preparations seem to have a very definite field of usefulness, as they undoubtedly exert an influence on deep seated infections which cannot be demonstrated with other drugs. Our own experience has been very largely with Pyridium, and we cannot ignore certain definite clinical facts after using it on a large number of cases. The seminal and prostatic fluids are definitely stained by the dye soon after medication is instituted, and the spermatozoa often show the presence of the dye, which would tend to prove a penetrating power of immense value in combating infections of these structures.

While our results with the use of Pyridium in renal infections have been most satisfactory, it is our opinion that the most spectacular results have been in the chronic infections of the bladder and the male genital organs. In stubborn cases of prostatitis, seminal vesiculitis and even in some cases of epididymitis the improvement under Pyridium medication has been most gratifying. The drug is very rapidly absorbed, in some instances being present in the urine a short time after oral administration, and is eliminated with corresponding rapidity. It is therefore advisable to give the tablets at regular intervals and in sufficient number to keep the urine a deep orange-red. This can usually be accomplished by one tablet containing .1 gram of the salt every three hours. As far as we have been able to ascertain the preparation is entirely non-toxic, and we have never noticed any objectionable results from its use except in a very few patients who complained of muscular pain after several weeks' constant use of the drug. Our experience has been such that we have the very highest regard for this preparation.

The intravenous use of mercurochrome has not proved satisfactory in most hands. Every possible precaution in the preparation of the solution and the technique of administration does not always assure us of freedom from reactions. Our experience with it has not been happy either in the matter of reactions or results secured. The use of gentian violet and similar preparations intra-

venously, while advocated by some in certain types of renal infections, can hardly be considered in this paper as they are not in the strict sense urinary antiseptics.

Neo-Arsphenamin intravenously has been found to have enough definite action to warrant its being grouped with the urinary antiseptics given intravenously. This fact is attributed to the breaking up of the compound in the kidney with the liberation of formaldehyd. Neo-arsphenamin does, unquestionably, exert a definite favorable action on various types of pyelitis, and in the hands of some observers has proved to be almost a specific in the pyelitis of pregnancy.

There seems to be no scientific proof available for methylthiomine or methylene blue exerting any antiseptic influence in the urine. On the other hand it would be very difficult to convince a great many physicians that methylene blue is without virtue. There is no question but that the clinical results from its use in certain types of genito-urinary infections warrant its use in selected cases. Many observers who have the opportunity of seeing a large number of cases, feel that it has real value in low grade bladder infections, and we have found it, in some cases, of definite usefulness in chronic mixed infections of the posterior urethra, and in the low grade, chronic bladder infections of the aged.

A comparatively new preparation on the market is a combination of metallic tin and a protein base to form a water insoluble compound known under the trade name of Tinpronate. Under the influence of gastric juice the protein molecule is gradually broken up and the tin liberated in an ionizable and soluble form. While accurate information is not available the theory is advanced that metallic tin exerts an anti-staphylococcic action in the body, and that tin aids the natural healing forces and enables the defensive cells of the body to successfully combat the infection.

Tinpronate, as far as we know, has never been suggested as a urinary antiseptic. In our work its usefulness in various staphylococcic infections, furuncu-

losis, etc., has been so definite that it occurs to us it might be of benefit in the low grade mixed infections of the genito-urinary tract. A clinical trial on ten acute, uncomplicated male gonorrheas and ten chronic mixed infections of the male genital organs yielded rather interesting results. In the case of the acute gonorrheas, with no other oral medication or urinary antiseptic, the patients had little or no discomfort and apparently cleared up with less difficulty and complications than the average case. The chronic cases were even more satisfactory, as five of them who had been on various other antiseptics made a marked improvement after the use of twelve grains of Tinpronate daily for a few days. While much too early to form any definite opinion, it would appear that Tinpronate is well worth further observation in this field.

#### CONCLUSIONS

1. Hexamethylenamine must still be considered our sheet-anchor in the field of urinary antiseptics.

2. Caprokol, while a most valuable preparation, does not invariably yield the clinical results that its theoretical qualifications would indicate.

3. Our present knowledge of, and experience with the azo dye group would indicate that these preparations have great possibilities as urinary antiseptics.

4. Metallic tin in a protein base deserves further investigation as a urinary antiseptic.

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#### Epidemic Cerebro-Spinal Meningitis

L. W. SHANNON, M.D., Hiawatha

[Dr. Shannon died December 3, 1931, after the following paper was received for publication. It is reported that he left his sick bed to read the paper before his county society.—Editor.]

Read before the Brown County Medical Society, Hiawatha, September 25, 1931.

I was prompted to consider this subject because of my experience with a case of epidemic cerebro-spinal meningitis a couple of years ago. An apology might be necessary for not considering this subject in full. I am not presenting etiology, pathology, or history as I know all these factors can be better found than I can give them here. And while it is not

presumed that a person should learn much from a single case, the amount of knowledge that I obtained through this single experience was of sufficient value to me to suggest to me that the points of interest that were developed in that case might be of value to others. I am not presuming or insinuating that others might be as ignorant of the situation as I was when this case was thrust upon me. We all know and will agree that very happily such cases are few and far between, and for that reason, probably, more than any other, we do not keep ourselves as closely in touch with the technique of diagnosis, management and treatment as we do in other cases that are more common. To the best of my knowledge, this was the first case of this type of meningitis that I had seen, or perhaps I should say recognized, since my internship, 28 years before, and as we had no serum at that time the treatment of such cases was generally the latest mental fancy of some keen observer. Therefore the discussion of this subject at this time will be limited largely to the points of interest that developed during the course of this case, some of which are found in text books and some of which are not. The secret of success in many of these cases depends altogether upon early diagnosis. This disease ranks first among the diseases that kill in the shortest length of time, death having been known to occur within four hours after the initial symptom. That, of course, is the extreme, but many cases have died in 12, 24 or 36 hours; therefore, early diagnosis and prompt action in heroic treatment are essential to success. The two essential and predominating symptoms are: pain in the head, accompanied by stiffness in the neck, and essentially the neck and not the lower muscles of the back, as is generally observed in cases of anterior polio-myelitis. There may or may not have been a prodromal symptom of general lassitude or, as the patient would put it, "extremely tired" feeling. If perchance there be meningeal involvement there would be vomiting as an early and very prominent symptom. Many times severe pain is caused by the extension of the leg upon



an extremely flexed thigh. With this clinical picture prevailing a spinal puncture is imperative, not only as a matter of positive diagnosis, but for the purpose of instituting early and radical treatment by the use of serum, if a positive diagnosis is made. If the cerebrospinal fluid is turbid or cloudy, the initial dose of serum should be given without waiting for laboratory diagnosis.

Of course the diagnosis should be confirmed by a laboratory examination, which is not a difficult task if one is provided with stains and a microscope. If the serum is turbid it will be found to contain a very high percentage of polynuclear leucocytes. The specimen should be centrifuged and a specimen fixed on a perfectly clean slide with a very mild heat, or possibly dried in the air. In a positive diagnosis the diplococcus is found within the cells, though many times many of them may be found outside the cells. This germ, being gram negative, is easily distinguished from the diplococcus of pneumonia, which is gram positive. After the diagnosis is confirmed the repeated examination may be more easily made by the simple methyl blue test.

A blood count in this disease is not a reliable factor in an early diagnosis. When any pathology does appear in the blood it is a very high polynuclear count, however many times the white count is normal.

The question of spinal puncture introduces the subject with which I had considerable trouble until I developed a technique of my own after which I had little or no trouble at all. The textbooks speak of spinal puncture technique as though it were as simple and uncomplicated as entering a very prominent vein on the forearm, and yet I have known a man who had made thousands upon thousands of spinal punctures to completely fail to enter the spinal canal under a situation that was not a little embarrassing. The text books all mention the fact that the position of the patient is very important, but the only point that they emphasize is that of complete flexion of the spine, and while complete flexion of the spine is absolutely necessary, my experience

has been that it is not the most important point in the position of the patient. These cases, because of their severe illness, are almost always operated upon while lying in bed, and naturally it would be necessary to have the patient lie upon one side or the other and near enough to the edge of the bed that the spine may be even with, or a little beyond, the edge of the bed. Now we all know the tendency of the average bed to dip toward the center; therefore the patient must necessarily dip with it. In other words the patient, lying upon the bed in such a position, is not in a perfectly horizontal plane, and if you try to enter the spinal canal with the patient in this position, you are obliged to estimate the angle that the patient deviates from a horizontal plane, and follow that line into the canal. Now it has been my experience and my observation that in this one point there have been many failures of spinal puncture. We all know that most of us can place a pencil or an instrument approximately at a right angle to a horizontal plane, but if we are asked to duplicate a certain angle of that plane it is not so easy to do. In a case of spinal puncture the patient's back is a vertical plane, and if he is lying in a bed that dips, not only because of his own weight but possibly because of the weight of an assistant or a member of the family, you may find the plane of his back deviating from a vertical plane as much as 15 to 30 degrees. Therefore, after several embarrassing attempts to enter the spinal canal under such conditions, I decided to balance my patient up and place him on as near a horizontal plane as possible, and after doing so with the patient in proper flexion and proper condition I can say, and not egotistically so, that I never failed to enter the spinal canal on the first attempt. Therefore I maintain that the position of the patient should not only be in proper flexion but maintained in such a position that the vertical plane of his back as he lies on his side would be at a right angle to the horizontal plane of his body as he lies in bed.

It is my experience also that a more perfect flexion of the spine is obtained,

and maintained better, by folding a sheet triangularly, passing it under the patient's neck and down under the flexed knees. When properly secured it is far more permanent and stationary than any person can get by trying to hold a patient in the same position.

After a positive diagnosis is made, there necessarily follows the treatment of the patient. The general management and care of the patient are all-important factors which I shall not discuss at this time, as a reference to any text book will give them in detail. But the all-important issue in the treatment of such a case, namely, the use of epidemic cerebro-spinal meningitis serum, I want to discuss, because of some observations that were forced upon me. The instructions furnished with the serum I used were to the effect that four or five doses would clear up the average case. The first doses were to be given 8 to 12 hours apart and after that, every day, or every other day, as the patient improved. And in this particular case there was apparently a miraculous recovery. Convalescence continued with no interruptions, and at the end of the second week it was planned that she should sit up for the first time, but to our surprise, on the morning of the day that she was to sit up, she complained of all the symptoms that had appeared at the beginning of the disease, and in a few hours there was a well developed recurrence of the disease. The serum treatment was pushed even more vigorously than during the first attack, but she did not respond as readily to treatment as at first. It took about 10 days to get her disease under control at this time. Following this recurrent attack, and after her response to the serum the second time, I made spinal punctures every day, and then every other day, for a period of two weeks, before I found the spinal fluid entirely free of the germ, giving a dose of serum every other day. And this brings out and emphasizes another observation that I did not find elaborated in text books, however I did find in medical journal reports by various men who had similar experiences, and the deduction is that no case of this type of meningitis should

be considered out of danger until the cerebro-spinal fluid is absolutely free of the germ causing the disease.

Another observation made was that after having given several doses of serum, the serum itself acted as an irritant to the cerebro-spinal canal, causing the production of cerebro-spinal fluid that increased the pressure to such an extent as to cause great pain in the head. I found that in such instances morphine was of little use but that a quick and permanent relief was obtained by withdrawing from a half ounce to an ounce of cerebro-spinal fluid.

I am offering no discussion of the technique of administering this serum other than the discussion of the spinal puncture.

In conclusion, I will summarize the important points of this discussion as they appear to me:

1. Severe pain in the head (not a headache) with stiffness of the muscles of the neck, with or without the usual prodromal symptoms are sufficient evidence to justify the spinal puncture for diagnosis.

2. In the performance of a spinal puncture the position of the patient is all-important, not only to have the patient properly flexed but to have the patient on a horizontal plane so that the vertical plane of his back will be perpendicular.

3. Repeated examinations of the spinal fluid should be made during the period of convalescence and occasional doses of serum given, until the fluid is perfectly free of the diplococcus.

4. Spinal punctures should be made to relieve spinal fluid pressure and pain.

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### **Tularemia—(Deer Fly Fever—Rabbit Fever)**

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Read before the Montgomery County Medical Society  
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Tularemia, in its method of propagation in man and lower animals, resembles the following previously studied diseases, from the fact that it becomes contagious through the action of an insect as the intermediate host. Malaria and yellow fever from the bite of a mosquito,



the former being from the genus *anopheles*, while the latter is from the *stegomyia fasciata*. Bubonic plague from the bite of a flea. Rocky Mountain fever from the bite of a tick. Kala azar from the bite of a bed bug. Trypanosomiasis—sleeping sickness—from the bite of a species of tsetse fly. Texas cattle fever from the bite of a tick. And tularemia from the bite of a flea, tick or deer fly.

In each of the above cases the insect bites an animal suffering from the disease in whose blood the micro-organisms abound. The germs on entering the body of the insect, now acting as an intermediate host, undergo a period of incubation varying from five to twenty days. At the expiration of the incubation period the insect becomes a carrier of the disease for the remainder of its life.

However the bites of these insects are harmless, unless they have previously come in contact with the bacteria which produce the disease.

Tularemia is an acute infectious disease caused by the bacterium *tularensis*. It is primarily an infection of rodents, especially wild rabbits and ground squirrels.

It was first described by Dr. G. W. McCoy of the United States Public Health Service in 1911: As "a plague like disease prevalent among ground squirrels" in Tulare County, California. In 1912, Dr. McCoy assisted by Dr. Chapen, discovered the causative organism and named it bacterium *tularensis*. In 1920, Dr. Edward Francis, of the United States Public Health Service of Washington, D. C., isolated the organism from man and rabbits and due to the fact that it was first discovered in Tulare County, California, named the disease tularemia.

It was at first thought to be a one hundred per cent American disease but cases have recently been reported from Japan and other foreign countries and we now believe it is a case of one hundred per cent American diagnosis.

As to its etiology, tularemia is caused by the bacterium *tularensis*, which is obtained from the blood of animals suffering from the disease or by cultures from

the blood, spleen or liver of animals dying from the disease. The cultures may be grown on coagulated egg yolk or serum-glucose-cystin-agar but the organisms will not grow on plain agar. Cases have been observed in man which were, no doubt, caused by the bite of deer flies and ticks. Many have occurred in laboratory workers, who had performed autopsies on infected guinea pigs and rabbits, while studying the disease.

Infection from sick to healthy rabbits is effected by a tick or a louse and from one ground squirrel to another by a flea, but as these insects seldom bite man, the possibility of thus contracting the disease is very slight. There are species of deer flies and ticks found in the mountain regions of the western states, however, that may be credited with the propagation of this disease in man. The greatest danger to man comes, not from handling live rabbits, but from dressing the dead ones for food.

The bacteria infested blood of the diseased animal coming in contact with cuts or abrasions on the hands produce the initial lesion. However it is possible for the organism to pass through the unbroken skin and in such cases no initial lesion would probably appear. Infected tissue or blood may find lodgement on the person's hands and be transferred to other parts of the body or find its way to the mouth and be swallowed.

In cases caused by the bite of a deer fly, tick or the germ entering through an abrasion of the skin, a papule develops at the point of infection and speedily breaks down, forming an ulcer about one-eighth to one-quarter of an inch in diameter with raised edges and punched out appearance with a necrotic core very closely resembling the staphylococcal ulcers so frequently found on the nape of the neck.

Four clinical types of the disease are recognized. The ulcero-glandular, the oculo-glandular, the glandular and the typhoid. The incubation period in the various types is from one to ten days.

There are no instances reported of the spread of the infection from man to man by mere contact or the bite of an insect

which has previously bitten a patient. However, hospitalized patients are not sufficiently thrown in contact with ticks, fleas and lice to fully prove the above statement. Surgeons who have incised glands, and nurses who have cared for patients have not contracted the disease.

In all types the onset is sudden, often occurring while the patient is at work. It is manifested by headache, fever, chills, muscular pains, vomiting, sweating and prostration. Within forty-eight hours pain is noted in the area of the lymph glands which drain the site of infection.

*Bacterium tularense* is a small pleomorphic, non motile, non spore-bearing, aerobic microorganism. It is found in bacillary and coccoidal form, the older the culture the more pronounced the coccoidal form. From cultures it stains with ordinary aniline dyes preferably aniline gentian violet or crystal violet. In sections from tissue it stains well with Mallory's eosin, methylene blue and Giemsa's solution, best by the latter stain. Cover glass preparations taken from pus of glands or local lesions are worthless. The most reliable method of diagnosis is by the agglutination with blood serum taken from a patient during the second week of illness, the test showing with higher dilutions during the third week. *Micrococcus melitensis* and *brucella abortus*, the germs which cause undulant fever, also give a cross agglutination test with *bacterium tularense*.

Infected animal tissue such as the suppurating glands, necrotic areas of the spleen, liver or initial lesions when rubbed in a mortar, mixed with normal salt solution and strained through coarse gauze, as well as pus from focal sites or defibrinated blood of man or infected animals, when injected into guinea pigs or rabbits, produce the disease, and the animal usually dies within seven days. Even infected tissue rubbed over the abraded surface of the animal will produce the disease.

In thirty-two reported cases bilateral skin eruptions appeared. They were in all grades from macular to pustular. In some instances the eruption was painful

and inflammatory but it is usually painless and does not itch. Desquamation and pigmentation has been noted.

The disease most closely allied to the typhoid type of tularemia is undulant fever caused by the *micrococcus melitensis* and the *Brucella abortus*. In the former, man acquires the disease from drinking goats milk, while in the latter, which is the commonest type in America, the disease is caused by the use of cows milk. Many dairy herds are afflicted. A cow while giving a good flow of milk seems to be less infectious than the one that is going dry preparatory to calving.

In undulant fever the onset is slow but in many respects the two diseases are identical. The symptoms are chills, headache, vomiting, sweating, aching bodily pains, fever and prostration. In this disease we also have the initial rise, remission and secondary rise in temperature, but while tularemia runs its course in from fourteen to twenty-one days undulant fever may last from six months to six years.

**Oculo-glandular type:** The onset and constitutional symptoms of this type are the same as other types but convulsions, stupor and delirium may also be present. The initial lesion if present at all is found in the conjunctival sack instead of on the skin. Twenty-nine of thirty-two reported cases were unilateral. Early manifestations are irritation, lachrymation, photophobia, swelling of the eyelids and surrounding tissue, edema of the ocular conjunctiva and usually a papule appears on the inner surface of the lower lid which soon breaks down, forming a typical initial lesion. At the same time swelling, tenderness and pain of the preauricular, parotid, submaxillary, anterior cervical and sometimes the axillary glands appear. In about one-half of the cases one or several of the glands suppurated but in no case was there sinus involvement. Permanent impairment of vision occurred in one case and ended in loss of vision in the afflicted eye. Perforation of the cornea, protrusion of the iris and fusion of iris and cornea into a compact mass occurred.

Fulminant cases running a rapid



course and terminating in death in six and eight days have been reported in the oculo-glandular type.

Four members of a family were stricken within twenty-four hours. Three of the cases were bilateral and all died, while the other was unilateral and ended favorably. They gave a history of having dressed wild rabbits three days before the onset of the disease.

Tularemia was demonstrated by animal inoculation, cultural and serological methods from the patient who survived but no tests were made from those who died.

**Ultero-glandular type:** The onset and symptoms are the same as previously mentioned. Within forty-eight hours the patient complains of pain in the area of the lymph glands which drain what is going to be the site of infection. On examination, the regional lymph glands are found tender and slightly enlarged. Within twenty-four more hours the patient locates the point of infection and the typical initial lesion rapidly develops.

If the site of infection is the hand, redness and swelling are noted, lymphangitis may appear, the lymph glands rapidly enlarge, the epitrochlears and axillaries are involved and in about one-half of the cases suppuration occurs, an abscess forms which ruptures or may be incised.

It may be well to add here: don't be in a hurry to use a knife, for by so doing you are adding insult to injury; while it may drain some you will very likely meet with the same result that you do when a chancreoidal bubo is incised too soon; the Lord only knows when it is going to stop draining.

In the other fifty per cent of the cases, after a more or less stormy course, the patient recovers and all glands remain intact, yet they remain palpable, firm and tender for two or three months but eventually return to normal.

The most rapidly fatal case reported was that of a Negro market worker in Dayton, Ohio, whose death occurred on the fourth day. He had multiple ulcers on his right hand, ascending lymphan-

gitis, epitrochlear and axillary adenitis. He was delirious and had a temperature of 106° when admitted to the hospital. He died twenty-four hours later.

**Bacterium tularense** was isolated by guinea pig inoculation from the blood serum of the patient taken on the fourth day and also from an axillary lymph node obtained at autopsy. The duration of illness of twenty-four fatal cases ranged from four days and seven hours to five months.

**Glandular type:** In these cases no initial lesion appears, the germ having gained entrance to the body through the unbroken skin. When the hand is the part involved, pain and enlargement of the lymph glands which drain the site of infection is noted. The glands nearest the infected site may suppurate and the abscess rupture through the skin. The epitrochlear and axillary glands are usually involved. Subcutaneous nodules simulating sporotrichosis were present on the forearm and arm in thirty-eight reported cases.

**Typhoid type:** In this type no initial lesion develops and there are no glandular enlargements. Whether the germ enters through the unbroken skin or is swallowed remains a question. The symptoms are much like the other types but not so pronounced. Fever is always present in tularemia regardless of type, all charts kept from those suffering from this type showed a constancy of sequence of initial rise, remission and secondary rise of temperature. Patients were quite ill with a temperature of 102° to 105° for two or three days, when suddenly the temperature returned to nearly normal, all symptoms diminished and the sufferer desired to get up and go to work, but after a lapse of two or three days a secondary rise of temperature and renewal of symptoms occurred and the cases ended by lysis. The febrile period lasted from two to three weeks.

While all types of this disease show the initial rise, remission and secondary rise of temperature simulating septicemia; yet the chill, sudden rise of temperature, sweating and prostration are not so well marked in the typhoid type.

Convalescence is slow usually several months in duration. Suppuration of lymph glands has occurred six months after the onset of the disease.

Some of the complications of the disease are broncho- and lobar pneumonia, appendicitis, general peritonitis, ulceration of the colon and jaundice.

In regard to diagnosis, acute febrile symptoms in a person who has recently dressed or cut up wild rabbits, especially when accompanied by local infection on the hand and swelling of the cervical, epitrochlear, and axillary lymph glands should suggest tularemia. The diagnosis can readily be made by agglutination tests from the blood serum of the patient taken in the second week of the disease. This same agglutination reaction is present in the blood of patients who have recovered from the disease, and therefore it is reasonable to believe that one attack will confer immunity for life.

A practicing physician who after reading about the disease wondered if when a child he had been one of its victims. He sent a sample of his blood to a laboratory to be tested and it showed positive agglutination for bacillus tularensis although it had been more than twenty years since he had the disease.

The diseases most likely to be confused with tularemia are typhoid fever, septic infections, anthrax, sporotrichosis and undulant fever.

A case of serologically confirmed tularemia in a man who was bitten by a coyote puppy was reported. A typical ulcer developed at the site of the bite accompanied by the characteristic glandular involvement. No other source of the disease could be obtained. Three coyote puppies were then fed flesh of guinea pigs and rabbits which died of tularemia. The puppies died and emulsions of their tissues were injected into guinea pigs which also died and pure cultures of bacterium tularensis were recovered from their tissues. Another guinea pig was injected with a suspension derived from the salivary gland of one of the puppies and it also died. This discovery introduced the possibility of a new avenue for the transfer of the in-

fection to man by the bite of rodents and carnivorous animals. The treatment is symptomatic as no vaccines or curative serum have yet been perfected.

Should you at any time feel the urge to take your trusty fowling piece and go to the fields in quest of prey it would be well to bear in mind these simple facts.

First be a sport and allow the animal a chance for his life. If when he leaps from his hiding place he shows the proper amount of enthusiasm, lays his ears back and takes off as though he intended to go places and secrete himself, it is reasonable to believe that should you be fortunate enough to kill him you nor your family need undertake the task of preparing him for the cook with fear and trembling lest his blood be saturated with the deadly bacterium tularensis.

But if bunny seems tame and jumps around like a barnyard pet you should, of course, kill him for that is what you went hunting for: but leave him lie where he falls to be devoured by vultures.

When rabbit meat is to be served it is a good plan to give orders to the cook that the meat be well done with particular emphasis on the *well*; for in these cases the red meat around the bone may not be a dainty morsel, as these germs withstand both high and low temperatures quite well. I believe that if the coyote and other carnivorous animals are not able to cope with the bacterium tularensis when it is taken into their bodies, man would have a poor chance of doing so, and some consideration should be given to the eleventh chapter of Leviticus, the eighth verse, where the Lord spake unto Moses saying, "eat not the flesh of the hare for it is unclean."

R

#### Ocular Causes of Headaches

E. J. MULLEN, M.D., Kansas City, Kan.

Read before the Wyandotte County Medical Society May 19, 1931.

It is my privilege to present this subject to you this evening and I feel sure it is an important one worth our consideration. One author lists 150 causes of headache, the causes being associated with all parts of the anatomy and all types of conditions. The proportion of



causes due to ocular condition, has been variously estimated, any place between 20 to 85 per cent, but to argue statistics gets us no where. The important fact is that headache is a symptom disturbing to one's comfort, and the relief of such a symptom is a great satisfaction to the attending physician as well as to the patient himself.

The mechanism of ocular headaches is not so difficult to understand. Let us refresh our memory with some important anatomical structures in the eye. First is the cornea with its curvature; anterior and posterior capsule of the lens acting as refracting surfaces for the rays. The iris which is the delicate shutter-like membrane controlling the size of pupil, and therefore the number of rays entering the eye. The iris moves over the lens capsule, being separated from it by the aqueous humor, a secretion of anterior portion of eyeball. The ciliary body and processes with its attachment of the suspensory ligament to the lens capsule come next. Back of this is the vitreous humor, surrounded by the retina—the seeing layer of the eyeball, with the optic nerve; and then the choroid. The nerve supply is extremely important, we have the motor nerves 3rd, 4th, and 6th; sensory nerves are 1st and 2nd division of the 5th. Sympathetic, from ciliary ganglion.

The delicate ciliary structure is more sensitive than the hand on a compass, and is the one structure of the eye, which is at the base of most ocular headaches. It is constantly being called upon in accommodation—that is the ability of the eye to adjust itself instantly to all types of impulses. Certainly all muscle fibre reaches a point of fatigue; as long as it stays within its bounds of contraction and relaxation, it will give off maximum work with no signs of weakness, but when it is attacked by an abnormal amount of impulses, it will fatigue, reach a point of exhaustion; then a vasomotor congestion occurs. The motor nerves carry these rapid-fire impulses to the visual center of the occipital region of the brain, the nerve and nerve center are likewise stimulated by this bombardment, and cause a similar excess of nerve

stimuli, vaso-dilatation and congestion. This causes a sensation of pain, referred to as headache, of the occipital region; likewise the excessive impulses are carried to the frontal lobe by inferior occipito-frontal bundle and to the temporal lobe which connects also with this bundle. This type of headache is due to excessive nerve stimuli from the ciliary body and processes. It is the result of the accommodating structure to do the extra work required for focusing of rays on the retina and is the mechanism of headache from a refractive error.

A good part of this paper will necessarily deal with refractive error and muscle imbalances. The ophthalmologist does a greater percentage of refraction than other ocular work, so it is only fair to take into consideration that part which reaches a greater number of cases. I wish here to state emphatically, that where headache is the symptom to be explained, a complete and satisfactory examination of the eyes must be made. All ideas contrary to the use of a cycloplegic are without judgment in my estimation. For one to criticize or condemn the ophthalmologist for using a cycloplegic in refraction and examination is similar to the questioning of a surgeon for using a splint in fracture, or the internist for rest in pneumonia. The only contra-indication of a cycloplegic is glaucoma and this condition should be easily recognized by a competent oculist. Usually the idea is fostered by those denied this privilege. When the time comes, that the practice of medicine and surgery must submit to the use of medicine as dictated by public sentiment, rather than scientific principles we had better fold up, and permit the charlatan to hold full sway. The intricacies of those delicate structures can not be unravelled unless the eye is placed at rest. The accommodating power of the ciliary muscle with its spasm and even in its normal state, is a variable quantity. It is dependent upon the focusing mechanism and the fixation mechanism, for good binocular single vision.

That these latent types of errors are not mere myths, we must accept the authority of those who know. One excellent

example is the following case: a female age 34, in good health, housewife, suffered periodically for ten years with headache and red eyes. Had used glasses at different times within this period without apparent results. She informed me an oculist wanted to dilate her pupils, but she had been told by some good friend or neighbor the probability of her going blind if she permitted it, so she repeatedly refused. After a number of trips to the office in attempting to convince her that was the only known method of eliminating the eyes as a factor, and through some change of mind she consented to the cycloplegic. My troubles were not at an end; the time spent in dilating her pupils, which was about forty minutes, was hysterical in action, making the examination most unsatisfactory and this had to be repeated in a week's time. However, the second time she understood what was going on, that bad after-effects were not present, and co-operated, so that satisfactory retinoscopy was done. Her corrected error was OD plus 4.00 diopters OS plus 4.50 diopters of hypermetropia. She brought to the office three pairs of her previous glasses and none had enough correction. This patient before cycloplegic could read 20/20 both eyes uncorrected but the constant ciliary spasm in an effort to get this vision was the underlying cause. For a week she called saying she had no headache but vision was blurred. I assured her this would disappear as it was the relaxation and accommodation mechanism, adjusting itself to the lens correction. In eight months' time she has had no headache and is just as much a booster as she was a critic.

Here is good material for thought in reference to bad after effects of a cycloplegic. In the Wills Hospital, Philadelphia, in four years' time, 20,000 patients were given cycloplegic of homatropine, atropine or scopolamin; of this great number two cases suffered ill effects, due to ignorance of over-dose on the part of parents. These two cases were temporary and had mild effects and readily responded to treatment. In the three years of my association in the eye clinic at Bell Memorial Hospital, Kansas

City, Kansas, I have yet to see in those countless eyes in which we have used it one bad effect from a cycloplegic. We must remember the effect of homatropine usually lasts from 24 to 48 hours, however the effect can be counteracted in a few hours' time by eserine. But the effect of atropine lasts 10 days or 2 weeks and there is no drug that will counteract its effect in less time than 10 days.

Next is a lesson for many of us—to give more thought to patients suffering from headache that could be relieved by correcting an error of refraction. A striking example is illustrated by this case: Mrs. M. Z., age 61 years, invalid five years from rheumatism, and confined to wheel chair; high blood pressure; complains of headache and dizziness; for many months she was under care of a recognized physician fully capable of helping her, if he thought it was due to some other cause than her ailment, and nervous condition from prolonged confinement. After many remedies, persuasion, etc., headache and dizziness persisted and a change of doctor was made. This man was more attentive but hardly as capable as the previous one. Following is the history he obtained from her: headache and dizziness always aggravated by reading and sewing of which she did much, but had to give up because of her headaches and dizziness. Her lenses had not been changed in ten years. I was called to examine this patient's eyes as a possible cause of her headaches and dizziness. It was very evident that the last doctor had determined the cause and when the correct lens for her presbyopia was worn, the headache and dizziness immediately disappeared, and the invalid was made happy, to be able to do what alone was possible in her wakeful hours, reading and sewing. Needless to say satisfaction was appreciated by all, family, patient and doctors. Why do we get careless and have to rely upon such simple methods to bring us to our senses?

Hypermetropes (far sighted) individuals, astigmatic errors, and presbyopes all have symptoms, of which headache will be prominent. Myopes or the near-



sighted patients, do not have headache, because their close work is not associated with accommodation and convergence to the point of fatigue. Less effort is necessary for them to see clearly, and less work on ciliary muscle. I will not burden you further with examples.

Another type of refractive headache is the panorama headache, those individuals who can't watch a movie show, ride in street cars, watch any athletic contest, without getting a splitting headache. They will usually fall in the class of high astigmatic errors. Astigmatism is that condition in which the refracting surface of the eye is not the same in all meridians, and consequently the eye does not focus images equally in all meridians, with the result of a blurring of objects. Ordinarily these patients complain of frontal or supraorbital headache, dull or heavy in character. It is essential here as elsewhere to consider time of headache and nature of occupation, knowing that these are important for diagnosis.

Another type of headache is that due to a muscle imbalance. We all know the movements of the eyeball are controlled by six extrinsic muscles coordinated in their movement, to make perfect harmony and to assure exact retinal image, on corresponding points of the retina. This impulse is relayed to the brain and interpreted as one clear visual object, denoting binocular single vision. The examination of the neuro-muscular mechanism of the eye is as necessary as the examination by the ophthalmoscope. Briefly we have deviation of visual axis due to strabismus in which apparent deviation of one eye is observed, and the latent type that comes on following fatigue. Cross eyes (strabismus) do not cause headache, because the good eye has learned to disregard its fellow eye, whose retinal visual perception is usually poor. The functioning mechanism is all confined to one eye and we have monocular single vision. The individuals with tabes who develop 3rd, 4th, or 6th nerve paralysis, and who have been accustomed to good binocular single vision, when their visual axes are off, due to paralysis, will suffer with a constant headache. The headache will persist un-

til paralysis is so marked that the visual axes of both eyes are widely separated, and they will learn to use in a few weeks' time, one or the other eye for single vision. While this is going on, in many cases, one eye must be occluded for relief from headache. There is certainly a disturbance in the fusion centers of these patients.

The latent type is referred to as heterophoria, one muscle being weak in action, the eye will tend to deviate in opposite direction producing interference with perfect binocular vision, or one muscle being overactive will tend to pull the eye in same direction. The visual acuity of both eyes good, differing from crossed eyes, and a constant effort to work in harmony with its fellow eye causes fatigue. If horizontal imbalance, it tends to turn the eye in and is called esophoria; if it tends to turn the eye out it is exophoria. If it is a vertical imbalance, one eye higher than the other, it is called hyperphoria. There is no manifest deviation, no diplopia in most cases but his ability to maintain single vision is dependent upon the amount of reserve energy he has, in order to whip those nerves centers that control the ocular movements into line. When this reserve energy is used up, fatigue takes place, and over stimulation of nervous impulse and confusion of retinal images bombarding the visual center, will not last long before a good headache has been worked up. Of all the muscular imbalances, the hyperphoria or vertical imbalance type is a more common factor as a cause of headache. The eye with its movements is more able to compensate for the others, in majority cases, but it is impossible for an individual to lower one eye while he raises its fellow eye.

If it is a big error, operation is necessary; the smaller errors usually respond readily to prism corrections. The treatment of all types of crossed eyes and refractive errors with the use of light muscle treatments as fostered by many outside the profession, in a majority of cases, this is just a new fangled idea of quacks to relieve people of their money. A case illustrating muscle imbalance, a dentist 22 years old consulted

me about his eyes, complained of headache that came on while doing his work; as he rested, the headache disappeared. After careful examination and refraction, with cycloplegic, a correction of one-half diopter of hypermetropia in each eye, with a prism correction of  $1\frac{1}{2}$  diopter for hyperphoria was given. This hyperphoria and not the refractive error was the cause of the headache; wearing of his correction gave permanent relief from headache. It certainly is a personal satisfaction to give relief for these headaches.

Next is the glaucoma headache; glaucoma as we all know is the increase of pressure on the inside of eyeball causing increase in tension on the structures. Headache from acute glaucoma, which is recognized by an acutely painful red eye, is an extremely excruciating type of pain, constant in character, fronto-temporal in location. This type of headache is constant and severe, and is only relieved by release of tension in the eyeball. This type of headache is easy to recognize because of the other marked ocular symptoms. The chronic type of glaucoma headache is one very difficult to recognize. It generally is the only symptom noticeable to the patient, and one which is very often neglected until the disease itself has done so much damage to the optic nerve as to cause in time complete blindness. I am going to take the liberty of discussing a few important factors of glaucoma, it is closely related to my subject as it is very often the only noticeable symptom of its presence, and only recently a patient was referred to me from a neighboring town who had been seen by a general practitioner and had her lens changed twice in six weeks by an optometrist, all during this time this woman had an acute painful red eye from glaucoma, that had no light perception when first seen in my office. Here was an eye allowed to go blind in two months' time, through lack of proper care. Glaucoma seldom makes its appearance before forty years of age, it is insidious in onset and is only paralleled by its disastrous results.

When we see these patients, this is the history. Past forty years of age lasting

two, four, six, or more years, has been awakening with dull ache, deep in orbit or in frontal region, passing off after being up and about. This headache begins during sleep, caused by the iris being relaxed, making the filtration angle smaller, tension increases in eyeball, and pain is exhibited. Once up and about, light contracts the pupils, increases the absorption of fluid and lowers the tension enough to relieve the ache but not low enough to relieve the tension on the structures. Vision perfectly good, or they might think themselves getting into presbyopic or bifocal age. Loss of vision is only normal. Usually the patient has been the rounds without relief from headaches. These cases can always be diagnosed by the ophthalmoscope with the familiar cupping of the disc or the tenonimeter which measures the tension of the eyeball. Later on I will attempt to differentiate this type headache from that of neurasthenia and migraine. Further I am not going to pass up this disease without mentioning one outstanding objective finding that all these chronic simple glaucoma cases have, and that is contraction of the visual field, more marked on upper nasal quadrant. Their central vision may be normal but the erroneous opinion is that they are about the bifocal or presbyopic age, which is true, but certainly does not account for their loss of vision. The increased pressure of glaucoma, puts nerve fibres under tension and congestion of vascular supply. It is not unusual that hypodermic doses of opiate are necessary for relief of glaucoma.

There is the occasional case of headache with nausea and vomiting that is treated for a good many months for gastric disease, biliary and hepatic disturbance, etc., only to be diagnosed later on as chronic glaucoma. Some valuable time has been lost to this patient, for once the nerve fibres of the retina are destroyed, the destruction is permanent. The morning type of headache from glaucoma must be differentiated from the sinus headache by the increased tension of the eyeball, with cupping of disc, etc. In all cases of headache between forty and sixty years of age, with cause



unaccounted for, glaucoma must be ruled out by an ophthalmologist.

Ocular inflammatory processes cause another type of headache, either severe or dull in character. Iritis with its inflammatory reaction in the muscle and nerve fibres, is a toxic process causing increased pressure. These inflammatory headaches are usually complicated by some meningeal irritation, with adjacent toxic manifestations. The inflammatory ocular headache is readily recognized by the other symptoms of a toxic process; with iritis, it is a painful red eye blurred vision, hazy cornea, exudate and adhesion in iris, irregular pupil, no reaction. Inflammation of the iris and ciliary tract cause headache, but inflammation of the retina, the choroid and the optic nerve never cause headache.

To differentiate an ocular headache from a neurasthenic headache: first, a good history of the headache; in a patient suffering from neurasthenia, the time is not constant, location variable, usually brought on by excitement or emotional stress, the bizarre explanation of emptiness, fullness, throbbing, tight band-like pain, etc., all lead to indefiniteness and want of sympathy. Complete examination of the eyes under cycloplegic is necessary to rule out absolutely, this type of headache as ocular in origin. To differentiate it from migraine, history again is necessary. A migraine sufferer gives definite family history, an intense headache, occurring periodically, frequently unilateral, lasting from a few hours to a day or more, associated with gastric distress, nausea and vomiting. There are very few headaches of ocular origin unilateral in character, the majority being bilateral. Migraine attacks will be shorter and less severe, with the interval between longer, if patient's eyes are kept accurately refracted.

Another not uncommon cause of headache must be referred to as postural, secondary to the eyes, in some cases attacking those who sit at a desk constantly with head bent over; whether this is done to get better vision, or is a careless posture, or whether it is due to a definite weakness in the neck muscles which does exist in some cases, must be determined.

We can certainly blame the fancy, up-to-date, beautiful, attractive, colored, and subdued lights, in many of the living and reading rooms of our homes as a cause of poor vision with ocular headaches. Headaches from brain tumor are constant, usually quite severe, and I might say that the ophthalmologist is often the first to see and diagnose brain tumor as the choked disc with scotomas and hemiopsia from central and visual field defects are evident before other symptoms or findings appear. The findings of optic neuritis by ophthalmoscopic examination aid to differentiate it from one of true ocular origin.

In conclusion, permit me to call your attention to some frequent causes of ocular headache, in the order of their occurrence; those due to refractive error, muscle imbalance, glaucoma, and inflammations. The history is as important in this condition as it is in all other diseased conditions, the location of pain, time of day, occupation, exciting causes, age of the patient, all have a definite place as an aid to diagnosis. The most important step for eliminating the eyes as a factor in headache, is a complete examination and refraction of the eyes under cycloplegic with a careful examination of the neuro-muscular mechanism. The satisfaction of relieving a few headaches has well compensated me for the time and effort spent in seeking the cause.

—————B—————

#### Letters from a Kansas Doctor to His Son

JOHN A. DILLON, M.D., Larned

My dear Boy:

As the world series is over I find time to write you again. Each year I make a solemn vow not to allow myself to get worked up over this contest and each year finds me sitting nervously in front of a radio agonizingly praying for some tobacco-chewing hero on my favorite team to make a hit—and boy! how that Pepper Martin did perform! The fellow got on my nerves before the series was over and I lay awake at night planning spectacular plays for him. I even dreamed that he was using a telephone pole for a bat, had stolen the grand-

stand in Shibe Park at Philadelphia and was sliding head-first into St. Louis.

Formerly dreams meant nothing except a touch of indigestion. Now we know they have foundations that can be scientifically evaluated. Interpretation of this dream of mine by a psychoanalyst would be—I don't like carrots, play only a fair game of golf, my grandfather had the Texas itch when a child and my libido is warped. But anyway, the baseball series is a thing of the past and we may again take up the problems of the day.

A short time ago I received a communication from the authorities at your school desiring an expression as to the wisdom of your having an automobile. I did not fill out the questionnaire as I wished to find out first-hand just what hardships you were enduring by reason of having no car. I find that you are nearly two blocks away from your class rooms and some of the hardier ones are walking this distance without ill-effects. I understand that there are facilities for getting back and forth from the football stadium that makes this task not *too* arduous. Of course, it means that your week-end trips to Kansas City will be by train, bus or a friend's car. I do not know what the custom is at your school, but at some places this expense is prorated among the passengers. For instance one man furnishes the car, another buys the gas, another the beer, etc. Of course at your school this custom does not prevail for the simple reason there is no beer—what?

But speaking seriously and giving you full credit I will admit you have not asked for a car. Probably the expense would not be prohibitive as I saw some in use down there that I judge would cost about \$11.50. You will remember that you went through the strip-down Ford stage several years ago. You and a friend worked on a car all one summer to make it appear screamingly funny. You took off the hood, fenders, and top. You substituted an old box for a good seat. You painted it a gaudy blue and yellow and decorated it with snappy epigrams, etc.; as I remember, "Chicken here's your Coop," was one that was in

general use that year. I did not object to this fling. In fact, I was glad to see you get it out of your system before you went to college where the more serious problems of pimples, sororities and pipes would confront you. Your mother would do a whole lot of unnecessary worrying if you were driving a car and this of itself is sufficient reason for not doing so.

We appreciated our visit with you and your brother on Dad's Day. Of course, mother and I stuck pretty close to our room at the hotel on account of you boys taking the car for your dates, but it is only fair to say you both were prompt in getting in to meals at the hotel. I can never get over feeling the goose flesh rise a little when you fellows pick up a menu card, especially, when you declare you are not hungry. I thoroughly enjoyed the football game although torn by conflicting emotions. Naturally I wanted the school of my sons to win, but bucolic by birth and western Kansas by environment, I had a greater longing to see those boys from Manhattan come out victorious. You did not realize this when I feebly cheered for K. U. on the infrequent occasions that justified it. It was the first game I had seen Rock Chalk in action for over thirty years and naturally I was curious to see just what a diet of Fleischmann's Yeast had accomplished. You probably do not know that this was officially endorsed for your athletes a number of years ago. I came away from the game convinced that the boys had not eaten their yeast or that its virtues have been over-extolled. But anyway it was a good game and the dads that I saw seemed happy and impressed when duly introduced to a fraternity brother.

I was unfortunate in not meeting any of the faculty members as I understand they are taking some advisory part in the school work. However, I feel satisfied that these groups of young people in their fine fraternity and sorority houses have the situation well in hand and will carry on for the good of old K. U. Signs of depression were practically absent and living as we do out here in the wheat country it was cheering, indeed, to note



the optimistic attitude of your college town.

A smiling hotel clerk charged me \$4.00 per day for room without bath and your younger brother charged me \$7.50 for three tickets to the football game—I have a sneaking suspicion that he received a commission on these tickets and by the way, I just now recall that he forgot to hand back the \$2.50 change out of the \$10.00 bill I gave him. Yes sir! it certainly was Dad's Day.

Our ride home was without incident. We met the usual number of big trucks which stuck consistently to the center of the slab with chicken coops, steers or what have you, hanging out over our heads. We were overhauled and passed while going fifty miles an hour by light cars with three or four young people in the seat, tenderly wrapping themselves around each other. It is one of the miracles of modern accomplishment to see a young lad drive a light car sixty miles an hour with one hand and attempt to meet the advances of a love-lorn lass with the other. Now in my time we would have stopped old Fan under a shade tree and have come to an understanding if it took until supper time. It might be recorded, however, that very few missed any meals even in those slow times. Mother and I both send love.

DAD.

R

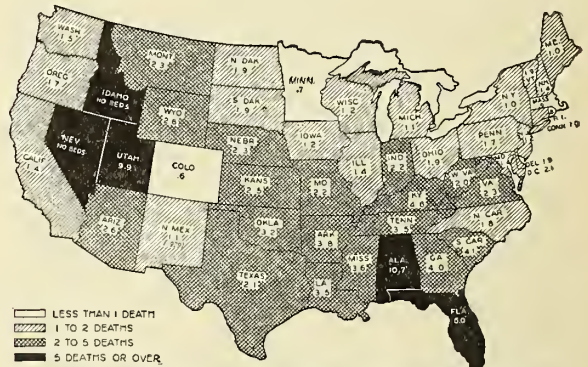
### TUBERCULOSIS ABSTRACTS

It is estimated that there are in the United States about 828,000 cases of active pulmonary tuberculosis. The total number of hospital and sanatorium beds now occupied by tuberculosis patients is about 80,000, leaving a remainder of 748,000 patients who are either receiving treatment at home or none at all. Perhaps most of those who take the cure at home do so because they are not persuaded of the advantages of the sanatorium. Others cannot enter institutions even though they would because of inadequate local provisions. A considerable number pursue the cure at home on the advice or at least with the tacit consent of the physician. Paul H. Ringer at the eighty-second annual session of

the American Medical Association discussed the question of home treatment versus institutional treatment of pulmonary tuberculosis. Abstracts of his paper follow.

#### HOME TREATMENT VERSUS INSTITUTIONAL TREATMENT

The uniform success achieved by sanatoria in all parts of the country has led to the belief that climate counts for nothing and that, therefore, the cure may be carried out just as well at home. But this attitude overlooks the prime object of the institution; namely, the education of the patient. Moreover, in the sanatorium, rest is found for the mind as



Number of beds for tuberculosis cases compared with number of deaths from tuberculosis—1928. (Exclusive of federal and penal institutions and hospitals for the insane.)

well as the body, for there are no responsibilities and a patient is surrounded by a sympathetic environment.

In only a minority of cases will home treatment work. Taking the cure is like finding "a way of life" and that way is particularly hard for the patient to follow at home. If there is nothing more to the treatment than bed rest, reasons the patient, he might better be at home. If he has a good home, that might be true but the point he overlooks is that, in addition to bed rest, there are details one learns from physicians, nurses, and other patients, the force of example, and the common routine. A period of quiet and of relative isolation helps the patient to regain his composure, after having been upset by the news that he has tuberculosis. He makes his adjustment to the necessary and tedious inactivity in the company of others who are trekking along the same trail.

In an institution, the regimen is so

planned as to make it easy to do the right thing. The patient must deliberately step out of line in order to do the wrong thing. At home, the patient is forced to swim against the tide, for relatives and friends have scant realization of the limitations that must be placed on the patient.

The patient at home may obtain bodily rest, but relaxation, that is, freedom from mental strain, is difficult to secure. He is subject to disturbance by 1, the family; 2, friends, and 3, business. Family irritation, not rare in health, is aggravated in time of sickness. Overanxiety of relatives, a deleterious influence even in an illness of short duration, becomes a factor of major seriousness when exerted over a period of many months. The normal chatter and noise of young children render the patient's nervous system taut. At the same time, the desire for expressed affection leads to many contacts and repeated exposure of the child to tubercle bacilli. All of the minor ailments and petty misunderstandings of the household impinge themselves on the consciousness of the patient, even in an affluent home and more so in one of poor circumstances.

The control of visiting friends is almost impossible. Strict visiting hours cannot be maintained. If there is a nurse, she is likely to be off duty during several hours in the afternoon, which is the time when friends commonly call. The disturbing gossip retailed by visitors who stay on and on leaves the patient fretful or worn out. Unsolicited advice about food and rest and "harmless" diversions, such as going to the movies or taking an auto ride, undermine the patient's morale.

Business associates are a disturbing element. Matters come up which by discussion in person or over the phone "take only a minute" to settle but leave hours of disquiet and worry. Business friends drop in when it is convenient to them and talk shop, which leaves the sick man unsettled in his mind and rebellious at the fact that he cannot take an active part. These difficulties, in principle, apply with equal force to women patients.

Most patients do best at an institution some distance away from home, say 200 miles. Visits of relatives are more difficult and telephone conversations less frequent. A factor to be considered is the enthusiasm, anticipation, or hope engendered by going away to a favorable environment; this the patient cannot possibly have if he simply goes to bed amid familiar surroundings.

#### THE DOCTOR SHOWS THE WAY

The determination to get well is essential. We physicians can only point out to the patient "the way of life"; mark the highway, warn against side roads, steer clear of impassable byways. We cannot carry the patient one yard, save in those cases in which lung surgery can be employed.

The author does not advocate sending the patient away from home immediately subsequent to a diagnosis of tuberculosis. Patients with tuberculous bronchopneumonia and patients who have had hemoptysis with subsequent areas of softening, accompanied by high fever and evidences of acute illness, are much better kept at home until the initial acuteness of the condition has subsided and they can be moved with relative safety. Nor should patients be "railroaded" out of their homes without being given time to take in the situation or to adjust themselves to what appears to be a cataclysmic upheaval in their lives.

The author feels that the great benefits to be obtained from leaving home and preferably from institutional treatment are as much psychic as physical; but in the case of tuberculosis, the psychic and the physical are so intimately blended that it is next to impossible to evaluate one above the other.

#### DISCUSSION

*Dr. James Alexander Miller:* The proper regulation of rest and exercise by which each patient gradually learns his individual limitations is the most essential element in the system of cure. As with many other forms of education, this knowledge comes only by long persistent effort. Schools are more effective than home study or correspondence courses. A sanatorium is a school for health. The patient learns unconsciously from the



example and experience of his associates. He need not learn entirely from his own mistakes, which are often costly. Gradually, the knowledge of his limitations leads him to a habit of life which is instinctive and consequently no longer irksome. The skilled guidance of a trained physician, experienced in the care of chronic diseases, thoughtful of varying temperaments, capable of giving inspirational guidance, always patient and persistent, helps the patient to acquire not only a habit but a philosophy of life which enriches his life.

*Dr. A. M. Forster:* "I was interested in what Dr. Ringer said about the difficulties of home treatment as compared in men and in women. I use an illustration in talking to the woman who wants to go back to her children. I tell her if we took her husband and put him in his office on a cot and told him that all he needed was rest, and that he need pay no attention to the bookkeeper or to the customers or to his partners or to the telephone, and would simply get himself into the proper psychologic state and would rest, then that situation would be comparable to what the woman has to submit to when she attempts to take a rest cure in her own home."

*Dr. James M. Anders:* Treatment in a sanatorium some distance from home is more nearly ideal, although to remove the patient a long distance has certain disadvantages. The force of example as an aid to the patient has been underestimated. In general, a stay of from nine months to a year is required to teach the patient the institutional regimen. When he has mastered that and if he possesses average intelligence, the treatment may continue at home.—*Pulmonary Tuberculosis—Home Treatment versus Institutional Treatment, Paul H. Ringer, Jour. of the A.M.A., August 8, 1931.*

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### Ownership of Roentgenograms

The question whether the roentgenograms of a hospital patient belong to the patient or to the hospital was answered by a court for the first time, so far as is known, in *Hurley Hospital v. Gage*, decided on appeal, April 21, by the circuit

court for the county of Genesee, Michigan. The patient had been roentgenographed in the roentgenographic department of the Hurley Hospital at Flint. The usual charge for the service was included in the patient's bill. He made a payment on account but refused to pay the charge for roentgenographic service unless the roentgenograms were delivered to him. The hospital refused to deliver them and sued the patient for the balance due. In the justice's court where the suit was instituted, judgment was given against the hospital. The hospital, however, because of the principle involved, appealed to the circuit court of Genesee County. At the hearing on the appeal, no one appeared on behalf of the patient and the case was heard and judgment rendered without the submission of evidence or argument by him. In giving judgment, the court pointed out that the hospital sold and patients paid for, not the material that went into roentgenograms, but knowledge and experience. The protection of the hospital might depend largely on the proper preservation of the roentgenograms and, said the court, the films should remain with the hospital. Judgment was given against the patient for the balance due on his bill, covering the amount charged by the hospital for the roentgenograms.—*J.A.M.A., Nov. 21, 1931.*

—————R—————

### For the New Year

Ring, ring the happy New Year bell  
And make its tongue of iron tell  
Of better days to be!  
That each approaching year shall give  
A holier life for man to live—  
With this should all agree!

Awake, arise, greet the New Year  
With many a shout and happy cheer,  
He comes thy life to bless!  
Now write in figures strong and bold  
The number of the year and hold  
It with all sacredness!

Then let each labor at his best,  
Meet every trial, every test  
With high efficiency.  
For man should make his mark on time,  
Should work and build a life sublime  
While moments onward flee!

—JAS. A. DEMOSS, M.D., Thayer, Kan.

✻ ✻ ✻

"If you go first, dear, you'll wait for me on the other shore, won't you?" questioned the fond wife.  
"I suppose so," returned her husband, with a sigh.  
"I never went anywhere yet without having to wait for you."

# THE JOURNAL

of the

## Kansas Medical Society

O. P. DAVIS, M.D. - - - Editor

ASSOCIATE EDITORS—L. W. SHANNON, L. B. SPAKE, P. S. MITCHELL, O. P. DAVIS, J. T. AXTELL, J. F. GSELL, CC. STILLMAN, ALFRED O'DONNELL, H. O. HARDESTY, I. B. PARKER, C. H. EWING, W. F. FEE.

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### THE SPIRIT OF CHRISTMAS

The season is at hand when again we celebrate the coming of the Christ-child. Nearly two thousand years have passed since that momentous event occurred in the lowly stable at Bethlehem. That child became a man, and gave the world a religion which stirred it to the very bottom and put a meaning into life that never had been known before.

Yet, however great have been the results of that man's life, the world likes best, at this Christmas season, to think of Him as a little child, and on this predilection is universally observed and cherished the greatest of all the red-letter days in human history. All other days we celebrate are limited in their observance to nations or to social groups. But Christmas knows no boundaries. It is of world-wide appeal. It surmounts every barrier. Its significance surpasses all analysis. It breaks down cynicism; it refutes skepticism. It is an expression of a universal love for childhood and for motherhood. It breathes the unspoken yearning of every one to be a child again, at least in spirit, if only for a fleeting hour.

So, we should look upon Christmas, not as a rite, nor as a pageant, but as an experience, a recurrent experience, a summation of all the similar experiences of the past, rolled up and combined with this approaching new one, making it the best, happiest and most vivid of them all.

Does Christmas get old and trite to us? God forbid! That were the surest sign of our waning interest in life; of our fading remembrance of all the merry Christmases gone, and of all the other things we should hold most dear, such as mother, childhood's associations, childhood itself, with its ecstasies, its visions, its hopes, its never-ending succession of joyous anticipations.

Yet, if by any chance our tender sensibilities have indeed become blunted to these finer intimations, and our eyes become dimmed to the visions once so alluring, let us sharpen them, let us clarify them, at this coming Christmas, by mingling with our children or our children's children or anybody's children, and try to catch from them, anew, the contagion of joy, good-will and good cheer that once coursed hotly through our veins and burned within us as the fire of youth.

May all our readers have this happy experience of renewing their youth with the children, and in this way making this latest Christmas the merriest one they have ever had.

### INVENTORY

As this is the month when an inventory is usually taken of one's business affairs, to determine just how things stand, why should we not make some such survey of the intrinsic values of our state society?

We call our society a medical organization and it is such in name. It is incorporated, it has officers, regular meetings and well-kept records. We some-



times use the term "organized medicine" in speaking of our collective membership, but this is a misnomer. Medical organization and organized medicine are not synonymous, under our system. Organized medicine must be far more than an ordinary, old-fashioned medical society, such as ours. It must be an effective, powerful machine which is big enough and strong enough to drive or pull or raise whatever is in front, behind or on top of it, as occasion may require.

The general idea seems to prevail, in our organization, that the chief function of a medical society is to get up a so-called scientific program and inflict it on such members as will come out and listen to it. And if the members, by their absence or indifference, refuse to listen to one another, as has often happened, the program is interspersed with some celebrities or big-wigs, from outside the state, as bait to draw and hold an audience.

It may be questioned whether any "scientific" program is really necessary, these days, at our meetings. This is an age when there is a surfeit of medical literature. The medical man's intellectual appetite is sated with the best, richest and most varied viands of authentic knowledge, not to mention the profusion of half-cooked articles that are daily brought to his reading table. So why should the busy practitioner go afield to hear medical papers read when as good or better papers, on the same subjects, may be deliberately perused at home? If there is anything worth while, or of real scientific value in any of these papers, it will soon get before the eye in printed form, and can then be properly masticated and digested. The ear is inferior to the eye as an avenue to intellectual alimentation. The eye is the brain's gullet.

But we do not expect to see the time

when papers will entirely cease to be read and discussed at our medical meetings. It is too old a habit to be entirely relinquished. But why not, at least, cut the number down to the minimum and give the time thus gained to something more important?

It is entirely wrong, we think, to pay so little attention to matters of social policy and legislation in our society. Under the present system these matters are in the hands of the House of Delegates, who hurry through their important duties so that papers may be read to them. The most important matters are thus neglected; matters that concern the entire profession, and which should be considered and discussed by all the members. We favor a revision of our system, so that there may be a democratic participation in the policies of the society by all who attend the meetings. If this makes a "scientific" program impossible, let us cut down the program, in large measure, or else let delegates be elected by the counties to hear the papers read.

We are certain of one thing: that the "scientific" program is not the main thing that brings the members out. What they really come for is to find fellowship, camaraderie, mutual exchange of points of view and hints of personal helpfulness. All this they get by mingling together on the outside, in the exhibits, in the lobbies or about the hotels.

The real ground on which we can have an effective organization, with profitable meetings and enthusiastic attendance, is that of common interest, mutual protection and co-operation. We have recognized this, in some measure, in adopting our medical defense feature, and this is the only thing we have ever done, with the exception of the recent publication of the "FOLKS" health magazine,

by way of an effective exhibition of our organized existence.

We have cherished long enough, as one of our chief purposes, the raising of the standards of medical education and the extermination of disease. We have made it harder to get into the profession, and harder to survive, when once in. Not that we are to stop doing these things but that we should stop boasting about it. The public is not in sympathy with our humanitarian projects. In fact, they openly evince their distrust. They may respect the individual physician, but they have no sympathy for the aggregate medical body. They are rapidly making us their easy and boasted prey. They are wheedling us into serving them for little or nothing. They are planning the complete socialization of medical practice. And we are gullible enough to invite such disaster to our profession by unsuspectingly joining them in their schemes. We are a jealous, disjointed, dismembered profession, indifferent or blind to our own future welfare. What are we going to do about it?

We have been soaring in the clouds of science and ethics in a sort of lighter-than-air organization. We must get down onto the ground and into a more serviceable vehicle. Our society must be made to take on some of the functions of the guilds or trades unions. There would be nothing discreditable in so doing. Indeed, these organizations have brought the mechanical arts and trades to be respected where they were formerly despised. The same benefits would accrue from applying similar methods to the problems which confront us.

We are not for the abandonment of our high position as (self styled) public benefactors nor our lofty standards of scientific efficiency, but we insist that to maintain that position and those stand-

ards, as well as to save our profession from degradation and eclipse, it will be necessary for us to make our society over into a mighty instrument for our expression and protection. If this cannot be done, with our present society, then we should form a distinctly new organization for such special purpose, and keep the old society as a pet.

R  
**Dr. C. A. McGuire**

#### A PERSONAL APPRECIATION

WM. MILLS, M.D., Topeka, Kansas

The death of Dr. Clarence A. McGuire on November 24, 1931, is a great loss to the medical profession of Kansas and to the state itself. Graduating from Rush, in 1884, he located in Topeka the same year, where he spent the entire forty-seven years of his professional life. While a young man he served as president of the Kansas Medical Society, and through the subsequent years was invariably present at the annual meetings, frequently taking part in the scientific program.

Dr. McGuire was a member of the board of trustees and president of the staff of Stormont Hospital for the span of an ordinary professional life, giving freely of his time and mature wisdom, in addition to making a generous monetary gift. His interest in the education of student nurses was keen, and only secondary to the truly paternal personal interest he felt in the welfare of each one.

For the past five years he was a member, and president, of the State Board of Health, during administrations of both political parties. His unswerving support of the secretary, Dr. Earle G. Brown, is largely responsible for the highly efficient work of the department during this period.

Professionally Dr. McGuire began and ended as a general practitioner, although in his later years his time was largely given to consultation and diagnosis. His outstanding characteristics were painstaking thoroughness, judicial analysis and uncanny ability to sum up the salient features of any case. Although his early medical education, measured by



modern standards, was pitifully inadequate, he mastered the later laboratory methods of diagnosis, and employed them to the fullest extent. Until his last illness, he remained a deep and constant student of medicine, deriving great pleasure from his reading.

"Mac," as he was familiarly called by his brother physicians, was known for his helpful friendliness to others, and especially to younger doctors. He will be remembered by many for his kindness, at times concealed beneath an apparently gruff exterior, and by all for his humor, which was ever present. It had a true Hibernian sparkle, and was as often directed toward himself as toward others. His ability, as a speaker, to hold the attention of an audience, was remarkable, being partly due to his use of metaphors and picturesque exaggerations.

No appreciation of Dr. McGuire would be complete without mention of his great courage and determination, which enabled him to continue in the practice of his beloved profession during fifteen years of great physical suffering. His candor and honesty were impressed on all who came in contact with him, and he possessed the qualities which bound his friends to him with the strongest of ties. Dr. McGuire was looked on as the dean of the medical profession in Topeka, not only because of his professional attainments and his years of service, but largely because of the love and respect with which he was regarded by all. In the words of Osler, he attained "one of the great prizes of the medical profession, a position in the community reached in the length of days by one or two, who, having added to learning, culture, to wisdom, charity, pass the evening of their lives in the hearts of their colleagues and their kind."

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## SOCIETIES

### JOHNSON COUNTY MEDICAL SOCIETY

The Johnson County Medical Society resumed its regular monthly meetings after a recess for the summer. The doctors and their wives met at Hotel Olathe, September 14. Dinner was served at

7:30. Dr. and Mrs. C. C. Nesselrode, of Kansas City, Kansas, were present, and after dinner, Dr. Nesselrode talked on "Some of the Possibilities in Medicine."

The October meeting was held at Hotel Olathe, with a dinner at 7:30 p. m. Plans were made for a "Health Day" in Olathe on November 2, 1931, with a clinic on tuberculosis in the afternoon and a public health meeting at night. There being no further business, Dr. E. C. Padgett, of Kansas City, Mo., was introduced, and talked on "The Position of Radium and Surgery in the Treatment of Cancer."

The November "Health Day" program began at 1:30 p. m. with the clinic on tuberculosis. Contact cases and those in the incipient stage of the disease were examined, Dr. C. S. Kenney, of Newton, Kansas, director of the Henrietta Brown Research, was the examining physician. The Kansas Tuberculosis and Health Association assisted in this Health Day Program. During the afternoon and from 10 to 12 a. m., Dr. Kenney examined forty-two persons, sixteen of whom were underweight children at the State School for the Deaf. At 6:30 p. m., an informal dinner was served at Hotel Olathe, at which Dr. Kenney and Dr. Carmichael were guests.

The evening meeting was held in the high school auditorium. Dr. Carmichael, superintendent of the State Hospital for Insane, at Osawatomic, spoke on "Mental Health," and Dr. C. S. Kenney talked of "Kansas and Our Tuberculosis Problem." Two vocal numbers, by Mrs. A. J. Hurt, and music by the Olathe high school orchestra, completed the program.

The December meeting will be at Bell Memorial Hospital, Kansas City, Kansas, with a clinic conducted by members of the staff of the hospital. The members of Wyandotte county society are invited to this meeting. This will be the third clinical meeting at Bell Hospital held this year, as part of the program of the Johnson county society. Dr. H. R. Wahl, dean of the medical department of Kansas University, is president of the society.

D. E. BRONSON, Secretary.

## FRANKLIN COUNTY MEDICAL SOCIETY

The Franklin County Medical Society held its regular monthly meeting at Ransom Memorial Hospital in Ottawa, the evening of November 25.

After a short business session, Dr. J. A. Milligan, of Garnett, invited our society to meet with the Anderson county society December 22, at their annual meeting.

The program opened with Dr. George W. Davis, of Ottawa, presenting two tapeworm specimens, with the clinical history. Dr. R. Lee Hoffman, of Kansas City, then gave us a very interesting talk on the Diagnosis and Treatment of Gonorrhea in the Male. After some discussion, this paper was followed by one by Dr. Sherwin E. Mella, also of Kansas City, who discussed the Diagnosis and Treatment of the Common Skin Lesions, also showing us some excellent lantern slides.

The meeting closed with an enjoyable luncheon, which was served by the hospital.

## NEWS ITEM

Dr. Hobart K. B. Allebach has been awarded a three year fellowship in pathology at the Mayo Clinic. Dr. and Mrs. Allebach will leave soon after the 1st of January to take up their residence in Rochester.

HOBART K. B. ALLEBACH, Secretary.

## SHAWNEE COUNTY MEDICAL SOCIETY

The annual meeting of the Shawnee County Medical Society was held on December 7, 1931, at the Hotel Jayhawk, a dinner preceding the meeting. One hundred and ten members and guests were present.

Dr. A. C. Ivy, Professor of Physiology of Northwestern Medical School, presented an interesting discussion on the Etiology, Symptoms and Treatment of Gastro-Duodenal Ulcers. The talk was profusely interesting with lantern slides in regard to the artificial development of ulcers in dogs.

The total paid membership for the year was 135. Three new members were elected during 1931 and one member was received by transfer from Sumner County. Six deaths occurred in the membership

during the year. Nine meetings were held, the average attendance being 58.

Officers elected for the year 1932 include: President, Dr. Wm. F. Bowen; vice president, Dr. Marvin Hall; secretary, Dr. Earle G. Brown; treasurer, Dr. Milton B. Miller. Board of Censors, Drs. M. G. Sloo and Guy A. Finney, the latter to fill the unexpired term of Dr. W. E. McVey, deceased.

Resolutions on the recent deaths of two members were adopted as follows:

GEORGE H. LITSINGER, M.D.

In the death of Dr. George H. Litsinger, the Shawnee County Medical Society has suffered a great loss. During his entire membership he has been an active member in the Society and in active co-operation in his work with the members of the profession. He was a man of exceptional personality, zealous in his work and possessed of great sympathy for those who were ill.

The Shawnee County Medical Society extends its heartfelt sympathy to the family, with the assurance that his memory will long be cherished by those who were his associates during his professional career.

CLARENCE A. MCGUIRE, M.D.

On February 14, 1862 there was born in Kewanee, Illinois, what appeared to be just an ordinary Irish lad. He lived an ordinary life there, going through schools as any other boy.

In 1884 he graduated from Rush where he was rather more than ordinary as one of his classmates states "he had the best mind in the class." The same year there landed in Topeka what appeared to be just another ordinary doctor but the progress here was far from ordinary.

Dr. C. A. McGuire now began the foundation of what later proved to be an extraordinary career. The associations formed at this time continued through life. There were very few contacts made with Dr. McGuire that did not go on to a genuine friendship. As a physician he had an uncanny insight, looking over some symptoms that looked big to pick out the obscure essential hidden from the less keen observer.



He was ever a great student and as a teacher in the Kansas Medical College nothing greater can be said than the boys wanted to go to his classes. As he advanced in years he became more interested in medicine and few men of any years could boast of the knowledge of the new advancements that "Mac" could.

To the younger practitioner he was a "Haven in a Storm," all were welcomed with that one cornered smile and when they left him they were wiser and much surer of foot. This justice was absolute whether the burden of that justice fell on him or the other fellow.

As a supporter of the medical fraternity he had few equals, and his attendance at medical meetings was most consistent. He often stated that he always got something of value there, but his modesty forbade his saying that he contributed much for his colleagues to take home. He was truly a father to the medical profession of Kansas. His public health work was as sincere as the rest of his life. He always gave the best he had. To countless numbers he was counsellor as well as physician.

Through the death of Dr. C. A. McGuire on November 24, 1931, this society lost a most valuable member, but had gained much through the years of his activities, and there is left a memory of service and accomplishment that will be a stimulus to us all for many, many years.

Fortunate is the man who can say "I knew Dr. McGuire."

EARLE G. BROWN, Secretary.

#### DOUGLAS COUNTY MEDICAL SOCIETY

The annual dinner meeting of the Douglas County Medical Society was held at the Hotel Eldridge, Thursday evening, December 3. Twenty-five members and two guests were present, this being the largest number in attendance within the memory of any of the present members. Following the dinner, Chancellor E. H. Lindley gave a very interesting address on "Doctors and the Rest of Us." His observations on the economic aspect of medicine and the high cost of medical care were especially interesting, in view of the low average income of the practicing physician. Following Dr. Lindley's

address, President A. J. Anderson presided over a short business meeting. Dr. G. W. Jones, in the stead of an unknown donor, asked the society which they would prefer as a gift to Memorial Hospital, a lung motor or an oxygen tent. After some discussion, it was voted that an oxygen tent would be very acceptable and very much appreciated.

Dr. C. E. Orelup, who practiced for many years in Lawrence and who is now a patient in the state tuberculosis sanatorium at Norton, was made an honorary member of the local society.

The society voted unanimously to extend a resolution of sympathy and regret to the relatives of the late Drs. C. A. McGuire and W. E. McVey of Topeka.

Officers were then elected for the ensuing year. The entire official personnel was re-elected for the third consecutive year. Never before in the history of the society has a man succeeded himself in office with the exception of Dr. E. M. Owen, who is beginning his sixteenth consecutive year as treasurer.

The officers are: President, Dr. A. J. Anderson; vice president, Dr. R. B. Hutchinson; secretary, Dr. Lyle S. Powell; treasurer, Dr. E. M. Owen; delegate, Dr. H. L. Chambers; censor, Dr. J. B. Henry (3 year term).

After some discussion the following men were elected to serve the society as a commission on medical economies: Dr. G. M. Liston, Baldwin; Dr. J. R. Bechtel, Lawrence; Dr. H. M. Clodfelter, Tonganoxie.

It was then voted that the program for the January meeting be Dr. Powell's motion pictures of European clinics taken last summer.

The following resolutions were adopted by the society; address to the families of Drs. McGuire and McVey.

The Douglas County Medical Society has at its annual meeting expressed an unanimous sentiment of appreciation of the life work, and regret at the passing of our dear friend and colleague, Dr. C. A. McGuire. He lived a full, well rounded life, always devoted to his patients and his colleagues. He was a great and good physician and a man absolutely sincere in all his efforts. We share with

you his loss and extend to you our sincere sympathy.

The Douglas County Medical Society has at its annual meeting expressed an unanimous sentiment of appreciation of the life work, and regret at the passing of our dear friend and colleague, Dr. W. E. McVey. We feel that his work was of such moment as to be felt by all of us for years to come. We share with you his loss and extend to you our sincere sympathy.

Meeting adjourned 9:40 p.m.

LYLE S. POWELL, M.D., Secretary.

— R —  
**DO YOU KNOW?**

E. G. BROWN, M.D.

Secretary, State Board of Health

That more than eighty per cent of the deaths from accidental falls occur in persons over sixty years of age?

That the number of deaths from diabetes in the state increased from 254 in 1918 to 395 in 1930?

That of the 395 diabetic deaths, 326, or 82.6 per cent were more than fifty years of age?

That 1,771 deaths of infants (under 1 year) were reported in 1930; the infant mortality rate being 52.0 for each 1,000 live births?

That on the basis of present returns and an absence of an acute respiratory tract epidemic the remaining weeks of the year, the infant mortality rate should not exceed fifty for the present year?

That of the deaths from broncho-pneumonia, only twenty-five per cent occur in the age group between ten and sixty-nine years?

That of the deaths from accidental burns, approximately eighty-five per cent of the fatalities occur as the result of accidents which originate in the home?

That Dr. H. Douglas Singer, professor of psychiatry, University of Illinois Medical School, says: "Shell shock" differs in no way from the functional disorders of civil life?

That of 237 maternal deaths reported in Kansas in 1930, 175, or 73.9 per cent

were charged to septicemia, albuminuria and convulsions or hemorrhage?

That the 1930 maternal death rate was 6.9 per 1,000 live births and was the second highest recorded in the past ten years?

That of 500 poliomyelitis cases occurring in 1930, 45.6 per cent had paralysis of one or both legs?

That in the past two years in this state, one death in each twelve was charged to an accident?

That nearly two per cent of death certificates received at the state board of health do not state the date of death?

That deaths from diarrhea and enteritis at the present time comprise less than ten per cent of infant deaths, as compared with approximately twenty per cent twenty years ago?

That 23.2 per cent of infant deaths in 1917 were charged to premature birth, as compared to 28.7 per cent from this cause in 1930?

That 56.7 per cent of the diphtheria deaths in 1930 occurred as the result of the laryngeal type of the disease?

That according to returns on the fatal cases of diphtheria in 1930, less than forty per cent of the patients were seen by physicians within forty-eight hours after onset?

That fifty-five cases of undulant fever have been reported during the present year?

— R —  
**DEATHS**

Mike Clements Jenkins, Pratt, Kansas, aged 45, was killed November 13, 1931, when an automobile in which he was driving was struck by a train. He graduated from the Kansas City Hanheman Medical College in 1911. He was a member of the American Academy of Ophthalmology and Otolaryngology and a member of the State Board of Medical Registration and Examination. He was a member of the Society.

Charles B. Van Horn, Topeka, Kansas, aged 59, died October 16, 1931, in



Stormont Hospital, of streptococcus septicemia. He graduated from Kansas Medical College, Topeka, in 1904. He was a member of the Society.

Paul K. Gaston, Pratt, Kansas, aged 59, was killed November 13, 1931, when an automobile in which he was driving was struck by a train. He graduated from American Medical Missionary College, Chicago, in 1903. He was a member of the Society.

Western Cass Loomis, Wichita, Kansas, aged 51, died October 9, 1931. He graduated from University of Illinois College of Medicine. He was not a member of the Society.

Ulrich M. Griffin, Girard, Kansas, aged 76, died October 25, 1931, of cerebral hemorrhage. He graduated from Homeopathic Medical College of Missouri, St. Louis, in 1880. He was not a member of the Society.

Leon William Shannon, Hiawatha, Kansas, aged 61, died December 4, 1931. His death is attributed to long continued use of the *x-ray*, which caused the loss of one arm by amputation this summer. He was councillor of the first district at the time of his death. He graduated from Rush Medical College, Chicago, in 1899. He was a member of the Society.

Clarence A. McGuire, Topeka, aged 69, died November 24, 1931, of aortic regurgitation. He graduated from Rush Medical College, Chicago, in 1884. At the time of his death he was president of the staff of Stormont Hospital and president of the State Board of Health. He was a member of the Society.

George Henry Litsinger, Topeka, aged 61, died November 3, 1931, of agranulocytic angina. He graduated from University Medical College, Kansas City, Missouri, in 1900. He was a member of the Society.

#### R BOOKS

Medical Clinics of North America—(Philadelphia number, September, 1931; Pacific Coast Surgical Association number, October, 1931; Chicago number, November, 1931.) Issued serially, one number every other month. Per clinic year, July, 1931, to May, 1932. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1931.

These numbers, of this well-known series, will be found to sustain the interest which has always attached to it. The subjects are well diversified, the contributors are of authoritative reputation, and the material is worked out in thorough detail. A bibliography is given at the end of each article.

Infection of the Kidney, by Meredith F. Campbell, M.D., F.A.C.S., attending urologist, Babies Hospital, New York Nursery and Child's Hospital, assistant visiting urologist surgeon, Bellevue Hospital, New York. Cloth, 343 pages, \$3.00. Harper & Brothers, New York, 1931.

This is an addition to the Harpers' series of Medical Monographs, and is a very practical and condensed treatise on the given subject. The author shows himself well qualified to write about infections of the kidney, not only of adult patients, but of children as well. His chapters on Methods of Examination, Diagnosis and Treatment are of especial interest and value. The practitioner will find in this little book information and instruction about the conduct of cases which are ordinarily difficult of diagnosis and treatment.

The Nurse's Medical Lexicon, For the Use of Graduate and Student Nurses, of Premedical and Dental Students, and of the General Public, by Thomas Lathrop Stedman, A.M., M.D., editor of the "Twentieth Century Practice of Medicine," of the "Reference Handbook of the Medical Sciences," and of "A Practical Medical Dictionary," formerly editor of the "Medical Record." Flexible cloth, 629 pages, \$2.00. New York; William Wood & Co., 1931.

This small dictionary, by a well-known medical lexicographer, commends itself, not only to nurses and students, but to the busy physician as well, not to replace his large dictionaries, but to serve as a handy desk accessory, adequate to meet all ordinary demands. The definitions are concise and clear. It appeals to us as a very commendable volume.

Simplified Diabetic Management, by Joseph T. Beardwood, Jr., A.B., M.D., F.A.C.P., chief of diabetic clinic and associate visiting physician, Presbyterian Hospital in Philadelphia, etc., and Herbert T. Kelly, M.D., F.A.C.P., associate in diabetic clinic, Presbyterian Hospital in Philadelphia, etc. Diets prepared with the collaboration of Elsie M. Watt, A.B., formerly dietitian diabetic clinic, Presbyterian Hospital in Philadelphia. Cloth, 191 pages; J. B. Lippincott Co., Philadelphia, 1931.

This work offers helpful methods to the diabetic patient and to the physician. It is generally recognized that to best

control diabetes, the one afflicted, as well as the physician, must have knowledge of the principles of diet. This knowledge should be presented to the patient in understandable form, and the instruction should be given by graphic methods so far as possible. This book meets these requirements very well, and will be found a welcome addition to the many texts available on this subject.

*Gynecology and Urology for Nurses*, by Samuel S. Rosenfeld, M.D., F.A.C.S., Adjunct Obstetrician and Gynecologist, Lebanon Hospital, New York City, etc. Cloth, 230 pages, \$3.00. New York: William Wood & Co., 1931.

This little volume is intended to enlighten the nurse in what the author thinks she should know in order to be able to attend her patients of these sorts intelligently. We are certain that the nurse who acquires the well considered knowledge available in this book will be a better helper for the gynecologist and urologist, provided she does not fail to serve well also in those duties which require common sense rather than technical erudition.

*How's Your Blood Pressure?* by Clarence L. Andrews, M.D., attending physician and medical chief at the Atlantic City Hospital, cloth, 225 pages, \$2.50. The Macmillan Co., New York, 1931.

Dr. Andrews has dedicated this book to those who are concerned about their blood pressure. It is well known that many people worry much on this subject and owe their apprehensions to misinformation. This work is intended to enlighten the lay reader and to help the victims of blood pressure psychology to get rid of their obsessions and to get an understanding of what blood pressure really is and what it means in relation to physical and mental health. It also gives suggestions and procedures that may help them to get better, or perhaps prevent them from getting worse.

### **The American College of Physicians**

The Sixteenth Annual Clinical Session of the American College of Physicians will be held in San Francisco, California, April 4-8, 1932. The headquarters in San Francisco will be the Palace Hotel, where the general scientific sessions, registration, and exhibits will be held. Clinics

will be conducted in various hospitals and institutions in San Francisco and near-by communities.

Dr. S. Marx White, Minneapolis, president of the college, has in charge the selection of speakers and subjects on the general program, while Dr. William J. Kerr, San Francisco, professor of medicine at the University of California Medical School, is the general chairman of the session, and is responsible for all local arrangements, in addition to the arrangement of programs and demonstrations. Following the San Francisco session a post-convention tour will be conducted through Yosemite Valley, Southern California (with two days in Los Angeles) and the Grand Canyon of Arizona.

The attention of the secretaries of various societies is called to the above dates, in the hope that their societies will select non-conflicting dates for their 1932 meetings.

### **The Revolt of the Biochemist**

In a recent address, Dr. Phoebus A. Levene<sup>1</sup> called attention to the return of belief in nonchemical agencies effective in biologic functions in a way analogous to the vital forces without which the distinctive manifestations of life cannot be developed. There are scientists still alive who can recall the revolt, in the last century, against the long accepted doctrine of organic vital forces. To the chemist, in particular, such accomplishments as the synthesis of urea in the laboratory by Wohler in 1828 and numerous subsequent demonstrations of the ability to produce artificially substances that were supposed to be restricted in origin to subtle processes of life offered a challenge against vitalistic hypotheses. Levene states that as early as 1860 the chemist Berthelot insisted that "the objective of our science is to banish 'Life' from the theories of organic chemistry." Although a century ago this subject dealt with the chemistry of organic life and, in a sense, every chemist was a biochemist, in more recent times synthetic organic chemistry became the chief concern of investigators. During this period the mechanistic conception of



life came into prominence. Life was to be explained without recourse to other principles than those involved in physics and chemistry, due recognition being made of the present limitation of our knowledge of these sciences. But the mysteries of living matter have not yet been interpreted by simple means. The impatience with the slowness of progress, the seeming impenetrability of some of life's secrets, are bringing the mechanistic philosophy into disrepute; and, as Levene has insisted, a "neovitalism" is acquiring modern devotees. However, Spoehr<sup>2</sup> asserts that, backed by a century of experience in carbon compounds, the organic chemist is again turning to the chemistry of the living organism. And Levene has championed anew the hope that life shall not remain forever a word without an accurate definition. Reviewing the truly remarkable contributions of the past few decades to the domain of biochemistry, he insists that, despite the seemingly slow advance, step by step, one mystery of life after another is being revealed. As Levene concludes:

"Whether the human mind will ever attain complete and absolute knowledge of and complete mastery of life is not essential. It is certain, however, that the revolt of the biochemist against the idea of a restriction to human curiosity will continue. Biochemistry will continue to function as if all knowledge, even that of life, were accessible to human understanding. The past has taught that the solution of one problem always opens up a new one. New discoveries in physics, in mathematics, in theoretical chemistry furnish new tools to biochemistry, new tools for the solution of old problems and for the creation of new ones. So long as life continues, the human mind will create mysteries and biochemistry will play a part in their solution."—J.A.M.A., Oct. 31, 1931.

1. Levene, P. A.: *The Revolt of the Biochemist*, Science 74: 23 (July 10) 1931; *Chem. Bull.*, June, 1931.

2. Spoehr, H. A.: *Science* 70: 462 (Nov. 15) 1929.

—R—

### Present Status of Anesthesia Problem

Arthur Dean Bevan, Chicago (J.A.M.A., Nov. 21, 1931), reviews briefly the subject of anesthesia, tests the various

anesthetic agents by the scheme of measurement which his associates and he have devised, and attempts in a judicial way to determine what anesthetics are today the safest, most efficient and most practical for use in a general surgical clinic. He believes that the use of chloroform, of intraspinal anesthesia, of intravenous anesthesia, of intrarectal anesthesia, of intratracheal anesthesia and of the so-called basic anesthetics, such as scopolamine, avertin and amytal must be limited to very narrow fields. Fortunately, local anesthesia, gas anesthesia, and ether afford three anesthetic measures which, if handled by an expert can be used alone or in sequence, with abolition of pain and, if desired, the abolition of consciousness and, when required, complete relaxation, and can secure complete and safe anesthesia for any and all surgical operations. This places anesthesia on a very unpretentious, simple basis, but here, as in all fields of surgery, it finally becomes apparent that simplicity is near truth. The author believes that the general adoption of this simple scheme of anesthesia will prevent many anesthetic accidents and save many lives.

—R—

### Human Side of the Hospital

Joseph Brennemann, Chicago (J.A.M.A., Nov. 14, 1931), states that after an extended experience with a dozen widely differing hospitals, as intern, attending physician, visitor and patient, his attitude toward a given hospital centers in the emotions, in the heart, rather than in the mind, and he believes that reaction is freely shared by others. It is not the idealness of equipment and of organization but the subtler spirit of enthusiastic and self-effacing cooperation, of steadfast, sympathetic loyalty and devotion to a common cause that is bigger than any individual, that makes hospitals. It is the atmosphere, the morale of a hospital, that makes or wrecks its reputation and its usefulness. The children may be well cared for; the medical staff may be made up of able clinicians and investigators; the superintendent may be as wise as Solomon and as "just" as Aristides, and may see that the whole machinery of ad-

ministration is well oiled and the physical equipment faultless; the board of trustees and the women's board may be actively interested and may do all that could be desired in other ways; the nurses may be intelligent, faithful and well trained; the interns and residents may be well schooled and prepared for their duties, may, indeed, get up at seven and be at breakfast on time; and yet the vital spark will be lacking if there is not back of it all an all-prevailing spirit of cooperation and of kindness or, as Emerson has so beautifully expressed it, "an element of love that permeates it like a fine ether."

—R—

Dr. J. L. Lattimore, Topeka, has been appointed by the Governor to succeed the late Dr. C. A. McGuire, on the State Board of Health.

Dr. P. S. Mitchell, Iola, has been appointed by the Governor as a member of the state board of medical registration and examination for the remainder of the unexpired term of the late Dr. M. C. Jenkins, Pratt, Kansas, who was accidentally killed November 13.

—R—

### **Significant Problems in Acute Anterior Poliomyelitis**

George Draper, New York (J.A.M.A., Oct. 17, 1931), calls attention to the fact that although the researches of the past twenty years have exposed many of the complicated secrets of acute anterior poliomyelitis, there are still certain key points which remain unsolved. Of these the most pressing are, first, the exact way or ways of transmission; second, the sure diagnosis of the disease before the movement of invasion of the central nervous system; and, third, a satisfactory method of protective immunization. An answer to the first of these problems would quickly set at rest the present justifiable anxiety of parents, because a real step toward epidemic control would follow. The suspected healthy carrier and the unrecognized mild case not show-

ing paralysis together form a combination which utterly defeats the ends of any but absolute quarantine of entire families. If, in addition to the now firmly established fact of direct transmission from person to person, there be added the possibility of raw food and milk borne infections, successful epidemic control is well nigh out of the question. Consequently, it is quite possible to answer authoritatively the frequent parental query: "Shall I take the children away?" As matters stand it is doubtless best to advise that flight from a known focus usually is futile. There are too many instances in which, at the new location of hopes for safety, the fleeing family finds itself settled next door to a case which developed on the day of their arrival. Ordinarily it is better to remain in the infected area and rely on the skill of the aroused and alert physicians to make an early diagnosis and administer immune human serum. The second master key, which indeed is almost fashioned, is that which opens the diagnostic lock in the preparalytic stage. So far as the individual stricken child is concerned, the solution of this point may be the means of saving life or preventing paralysis. The scope and purpose of the author's paper, however, do not permit a discussion of the clinical picture of the systemic phase of the disease. There is a stage in the disease which precedes that of beginning muscle weakness in which there is clear clinical evidence that the anterior horn cells are already intoxicated though not yet seriously injured. This is the stage of ataxic tremor and muscle twitching. It seems to be analogous to the excitement stage of the experimental disease in monkeys. When this ataxic tremor sets in it is fair to assume that the virus has already entered into conjunction with the anterior horn cells. The physiologic effect of this



first entry is one of stimulation. But since this union has been formed the moment may be too late to expect successful neutralizing effects from the serum. Consequently, these cases, should they go on to paralysis, will fail to support the therapeutic value of the serum. Clearly, then, the brief interval of time between the moment of chroid plexus penetration and the moment of virus-cell union "passage period" is the precious period during which the serum can be expected to neutralize the invading virus and so prevent paralysis. Not only is this period of short duration, but it is extremely difficult to place accurately in the course of the malady. The time relationships between the systemic phase, the "passage period" and the ataxic tremor phase are fairly well indicated by the correlation of clinical signs and spinal fluid observations. Furthermore, it has been definitely shown that immune human serum can block paralysis in monkeys infected with poliomyelitis virus. Having these facts at one's disposal, one should be able to prevent paralysis except in those comparatively few cases which display so slight and transient a systemic phase that the second or central nervous system phase arrives apparently as the first sign of illness.

R

#### **Bronchoscopy As Aid in Diagnosis of Obscure Pulmonary Disorders**

According to Edward A. Looper, Baltimore (J.A.M.A., Oct. 31, 1931), the practical use of bronchoscopy as an aid to the diagnosis and treatment of disease of the chest is increasing in favor. In many cases a final diagnosis can be made only through the help of endoscopy after all other means of investigation have failed. A well equipped central clinic unquestionably affords the best opportunity for the study of such cases, but for various reasons many deserving pa-

tients never reach such a clinic. It is apparent, therefore, that there is a fertile field for investigation for the bronchoscopist in hospitals for the treatment of pulmonary diseases. The author earnestly hopes that the time will soon come when the management of all hospitals for the treatment of tuberculosis will insist on the establishment of a bronchoscopic clinic as an important department in such institutions.

R

#### **Etiology of Influenza: Transmission Experiments in Chimpanzees with Filtered Material Derived from Human Influenza**

Perrin H. Long, Eleanor A. Bliss and Harriet M. Carpenter, Baltimore (J.A.M.A., Oct. 17, 1931), transmitted disorders characterized by fever, prostration and a leukopenia to three chimpanzees by intranasal inoculation with bacteria-free filtrates of rhinopharyngeal washings obtained from individuals ill with human influenza. A similar condition was produced in an ape during a non-epidemic period by means of an intranasal inoculation with unfiltered influenzal material which had been preserved in the icebox for 123 days. The difficulty of interpreting with complete satisfaction the observations made on the apes is obvious and the authors therefore present the observed facts with the knowledge that they conform with those previously reported in man by other investigators.

R

#### **Should Cod Liver Oil Be Flavored?**

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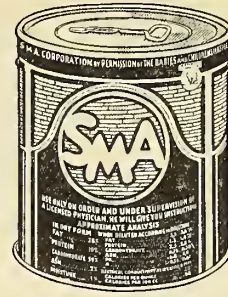
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